

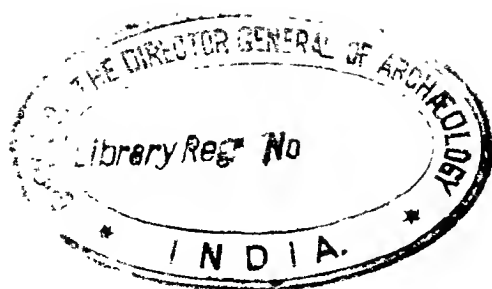
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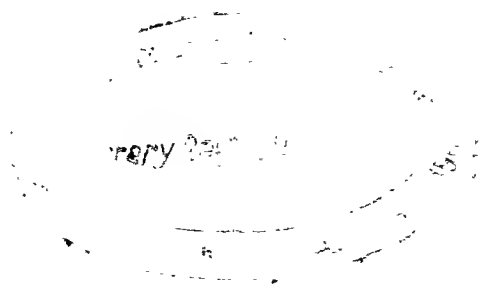
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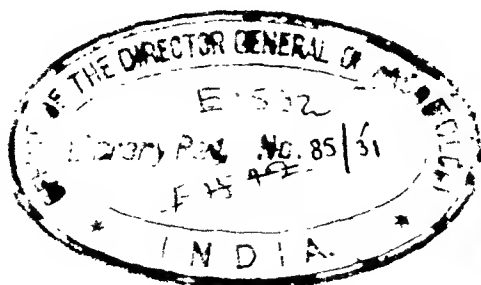
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DIRECTOR OF EXCAVATIONS IN BABYLONIA, EGYPT, AND PALESTINE (OPHEL, 1923-25)
WILSON FELLOW OF ABERDEEN UNIVERSITY (TWICE)

VOL. I

THE CROALL LECTURES FOR 1928-29 AMPLIFIED

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PREFACE

IN this work I have endeavoured to give expression to the latest opinions and discoveries affecting the various problems raised. Opinions change so rapidly that on several points I have had to alter my statements as the book progressed. Two of the most important problems are the origin and date of arrival of the Hyksos and the Hittites in Palestine. There is no doubt that the Amorites were the first immigrants. Recent discoveries, however, prove that the Hyksos were in Palestine by 2400 B.C., and consequently, if the date assigned to the Hittites, *c.* 2000 B.C., be correct, they preceded the Hittites.

Instead, therefore, of saying, as I do on p. 72, etc., that the Hyksos were the result of an amalgamation of Amorites, Hittites, and other peoples, it will be more in accordance with present opinion to say that from 2400-1600 B.C. the Canaanite inhabitants were an amalgamation of Amorites, Hyksos, and Hittites.

I desire to acknowledge my indebtedness to the Croall Trustees, who made this work possible by appointing me their Croall Lecturer for 1928-1929; to the writers of the many works referred to in the text; and to the following who have kindly allowed me to use illustrations from their works: Dr. A. F. Albright, now of Philadelphia, U.S.A.; P. L. O. Guy, excavator of Megiddo; The Palestine Exploration Fund; Professor Sir Flinders Petrie; and Père Vincent, Dominican School, Jerusalem. To Dr. W. K. Lowther Clarke, Editorial Secretary of the S.P.C.K., I am greatly indebted for his help and criticism, and to my daughter Isobel, who has acted as my secretary.

J. G. D.

October, 1930.

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ABBREVIATIONS AND BOOKS REFERRED TO

- A.J.O.R. = American Journal of Oriental Research.
 A.S. = 'Ain Shems, Beth-Shemesh (Mackenzie—P.E.F.).
 B. = Bliss (Dr. F. J. Bliss).
 B. and D. Ex. J. = Excavations at Jerusalem, by Bliss and Dickie.
 C. (alone) = Cave.
 Corpus of Palestinian Pottery (1930), by J. Garrow Duncan.
 D.S.L. = Schweich Lectures, 1908, by S. R. Driver, D.D.
 E.B. = Early Bronze Age.
 E.I. = Early Iron Age.
 E.P. = Excavations in Palestine, 1898-1900, Bliss and Macalister.
 E. and I = Egypt and Israel, by Flinders Petrie.
 E.E.O.T. = Egyptian Exploration and the O.T., by J. Garrow Duncan (1908).
 G. = Gezer (3 vols.), by Prof. R. S. Macalister.
 G.T. = Gezer Tomb.
 G.A.S. = Sir George Adam Smith.
 Gr. = Gerar.
 G.R. = Gizeh and Rifeh, by Flinders Petrie.
 H. = Heliopolis, by Flinders Petrie.
 H.B.D. or H.D.B. = Hastings' Bible Dictionary.
 H.C.M. = Higher Criticism and the Monuments, by Professor Sayce.
 H.I.C. = Hyksos and Israelite Cities, by Petrie and Garrow Duncan.
 H.H.S. = Hogarth's Hittite Seals.
 J.P.O.S. = Journal of Palestinian Oriental Society.
 Jericho, by Sellin and Watzinger.
 J.S.T. = Jerusalem sous Terre, by Père Vincent.
 L.I. = Late Iron Age.
 L.B. = Late Bronze Age.
 M.B. = Middle Bronze Age.
 M.I. = Middle Iron Age.
 M.M.C. = Mound of Many Cities (Tell el Hes), by F. J. Bliss.
 M. = Macalister.
 Mgd. = Megiddo.
 N.B. or N. and B. = Naqada and Ballas, by Petrie and Quibell.
 P. = Sir Flinders Petrie.
 P.Hist.Eg. = History of Egypt, by Flinders Petrie.
 P.E.F. = Palestine Exploration Fund.
 P.E.F. Ann. = Palestine Exploration Fund Annual.
 P.E.F. Ann. IV. = Palestine Exploration Fund Annual IV., by Macalister and Duncan.
 P.E.F.Q.S. = Palestine Exploration Fund Quarterly Statement.
 S. = Samaria, by Reisner, Fisher, and Lyon.
 S.P.C.K. = Society for the Promotion of Christian Knowledge.
 T.H. = Tell el Hes, by Flinders Petrie.
 T.M. = Tell el Mutesellim (Megiddo), by Schumacher.
 T.A. Letters = Tell el Amarna Letters.
 Tk. = Tell Ta'annek, by Sellin.
 V. = Père Vincent.
 V.C. = Canaan, by Père Vincent.

OTHER WORKS CONSULTED

Bethpelet. Sir Flinders Petrie.

D.N.B. La Déesse Nue Babylonienne, by Contenau.

Encyclopædia Biblica. Cheyne.

Heth and Moab. Conder.

The O.T. in the Light of Historical Records and Legends of Assyria and Babylonia. T. G. Pinches. (Abbrev. A. and B. Pinches).

The Museum Journal. University of Philadelphia, Pa.

The Annual of American Schools of Oriental Research, Vol. IV. W. F. Albright.

The Archæology of the Holy Land. P. S. P. Handcock.

Authority and Archæology. D. G. Hogarth.

Céramique Cappadocienne.

Ancient Egypt. Magazine edited by Sir Flinders Petrie.

DIVISIONS OF THE SUBJECT

THE Archaeological History of Palestine, so far as it is known to us at present, may be divided into the following periods :

1. The Neolithic, or Cave-dweller, Period, dating from an unknown limit prior to 3000 B.C. down to and after 2000 B.C. Traces of the Cave-dweller Civilisation are found very much later than 2000 B.C. The Neolithic Period in flints, *e.g.*, continues down to 1200 B.C.
2. The Early Bronze Age—Amorite Immigration—dating from prior to 2500-2000 B.C.
3. The Second or Middle Bronze Age—Amorite and Hittite—2000-1600 B.C.
4. The Third or Late Bronze Age—Egyptian occupation—1600-1200 B.C.
5. The Period of Hebrew Conquest, and Period of the Judges about 1200-1050 B.C., Transition Period.
6. The Hebrew Pre-exilic Period, 1050-597 B.C.
7. The Period of the Exile—Exilic—597-440 B.C.
8. The Hebrew Post-Exilic Period, 440-50 B.C.
Embracing :
 - (a) The Greek and Persian Periods, roughly 600-300 B.C. Greek influence, however, appears as early as the eighth century B.C.
 - (b) The Hellenistic Period, 300-50 B.C., including the Maccabean Period, 150-50 B.C.
9. The Roman Period, 50 B.C.-A.D. 350, including the Herodian Period, 50 B.C.-A.D. 70.
10. The Byzantine Period, 350-A.D. 700.
11. The Arab Period, roughly A.D. 700 to modern days. The period from 1250 B.C. downwards is also spoken of as the Iron Age, and is subdivided thus :
 - Early Iron Age, 1250-1000.
 - Middle Iron Age, 1000-600.
 - Late Iron Age, 600 downwards.

I

THE NEOLITHIC OR CAVE-DWELLER PERIOD

c. 3000 B.C.—*c.* 1800 B.C.

THE NEOLITHIC AGE

THE earliest limit of the cave-dwelling period is usually spoken of as 3000 B.C., but this is purely arbitrary. We have no definite information which could fix that limit as incontestable. On the contrary, everything points to the cave-dwelling age having extended over a very much longer period of years than 3000 to 2500. It is much more likely that it extends back as far as 10000-12000, if not even earlier, and traces of the cave-dweller civilisation are found as late as the II and III Bronze Ages, 2000-1200.

Of the sites excavated, only Gezer, Megiddo, Jericho, Ta'anach and Ophel have yielded materials that can be assigned to the Neolithic cave-dwelling period. Sites of cities on low ground or on the plain may be expected to be deficient in Neolithic remains. Hill-sites and natural Tells, on the contrary, have supplied a considerable amount of information, though continuous occupation has largely obliterated all traces. This is what we should naturally expect. The cave-dweller was a hill-dweller, an inhabitant of the rocks.

The hills of Jerusalem itself, and around it, in Trans-Jordania, all over the country in fact, are full of caves, which were originally the dwelling-places of the early inhabitants, and their tombs. Later they became the tombs of the Bronze Age, and sometimes were converted into store-chambers, especially those with staircases cut in the solid rock leading down into them from the surface, or into secret places for hiding treasure. These stairs were often concealed by a slab fitting closely into an oblong opening at the top of the steps, as, for example, at Gebel Hoshā.¹ Sometimes they were converted into cisterns, even in the Bronze Age. The caves underneath the village of Siloam are now used as stables and cellars.

CAVES, NATURAL AND ARTIFICIAL

By far the greater number of the caves in Palestine are of natural formation. Some are artificial, and many are natural

¹ See P.E.F. *Quarterly Statement*, October, 1927.

caves artificially extended. Examples of all three types may be seen in any part of the hill country of Palestine, but these have been so constantly occupied that most of them have lost all historical value.

The best series of caves known to us that have passed through the various stages of occupation are those at Gezer. There the cave-dweller was superseded by the Amorites, who built their dwellings above ground and fortified their towns. Frequently they built their houses or town-walls over the mouths of caves in such a way as to make future occupation impossible, so that these caves are left to us as they were abandoned by the cave-dweller some three or four thousand years before Christ. More frequently they reused them as tombs, cisterns, stores, or for other purposes. In these we find successive civilisations represented with cave-dweller remains in the lowest stratum. Dr. Macalister has examined and described altogether about fifty of these caves of Gezer. Most of these were originally Neolithic dwellings, but one at least appears to have been a cave-dweller burial-place or crematorium. This cave (Cave 2, I) I have described under Religion.

There are very few tool-marks on the walls of these caves, so that, like most others, they were probably all natural caves. Where they had been enlarged for dwellings, the work had been done mainly by hammers, though occasionally the marks of flint chisels are traceable. They vary from 18 to 40 feet in diameter. The roofs are usually so low that one has to stoop when moving about. This suggests that the cave-dwellers were of small stature, but frequently I have noted that the height of the roof depended on securing the thickest possible stratum of rock to serve as roof, notably in the artificially extended caves at Gebel Hoshā.

In most of them, the entrance was a hole in the roof, not in the side of the chamber, and from this entrance a stairway cut into the side of the cave led to the floor. The steps of this stair were about twelve inches broad and six inches deep, and it was as a rule so narrow that two people could not pass on it. In others, the stair was replaced by a sloping passage from the roof entrance, and in some of the shallower caves the only means of entry was by a drop from the roof. In only one cave, that near the High Place, was any evidence found of an attempt to close the roof entrance by some sort of door. No trace of any construction to check the inflow of rain-water by

the roof was found, though probably this was averted by a door or some mud-structure which has perished.

The caves play a great part in the legendary lore of the country, and weird tales are told of some of them by the natives.

There is a legend, recorded by M. Clermont-Ganneau, that a great "artillery duel" took place between the Jews entrenched in the enormous cave, Mugharet el Jaiyah, on the hill-side opposite Gezer, and Noah established in his city of Gezer.

Another local legend tells how a boy pursued a calf into the chamber of this enormous cave and both vanished. Later the boy and the calf arrived in Jerusalem, having presumably travelled underground: but the calf was now an aged cow, and the boy a grey-haired old man.¹ At Tiberias there is an enormous cave in the hill on which Herod's Palace was built. I was told that this cave leads into a tunnel or series of tunnels, which is about fourteen miles long and comes out somewhere beyond Nain. I was strenuously dissuaded from attempting to explore this cave and tunnel on the ground that the tunnel is really a maze, and I should never find my way out. This tunnel, it may be noted, passes under the Palace of Herod, who doubtless made use of it as a prison house or place for the disposal of troublesome people, for there seemed to me to have been artificial shafts leading down to it from the courtyard of the Palace.

Apart from Gezer, the only other series of underground cuttings recorded are the caves of the Shephelah, also described by Dr. Macalister.

Of the Gezer caves, I have selected a few which are of greatest interest and representative of the various types found.

Gezer Cave 28, II

Of the many caves discovered at Gezer, one, Cave 28, II, which is partly natural and partly artificial, is outstanding, remarkable alike for its extent and its contents. There are ten chambers, each of which can be entered by an underground tunnel, and nine separate entrances, made at various periods, from the outside. The whole system has been excavated chiefly by the hammer, and the few tool-marks found indicate that only

¹ Macalister, *Gezer* I, 71.

flint chisels were used, and these only occasionally. It is more like a small underground village, and must have accommodated more than one family. Part of it seems to have been set apart for religious or congregational purposes, the rest being used as dwellings.

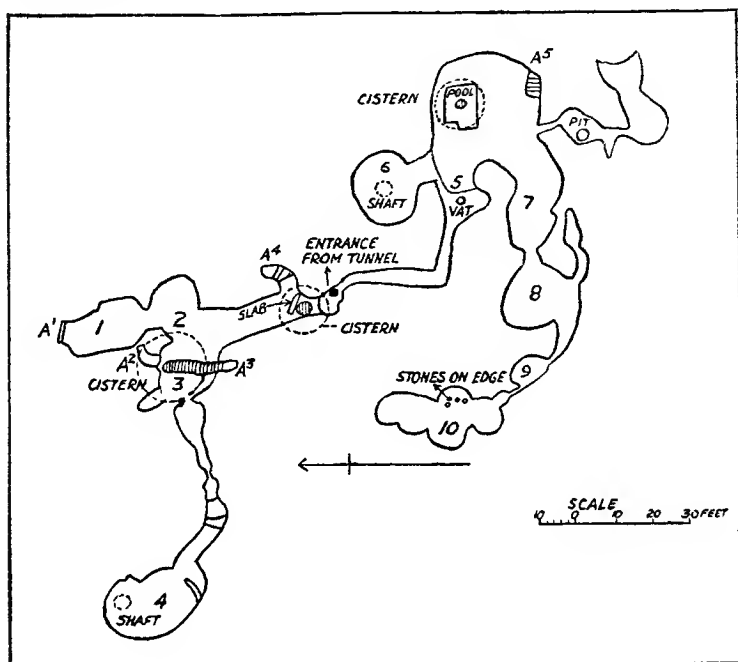


FIG. 1.—GEZER CAVE 28, II.

THE HORSE-SHOE ROOM

The main entrance from outside at the north end leads into the first and most remarkable chamber of all.

Arranged round the floor of it, in the form of three horse-shoes within each other, are a series of forty-two cup-hollows, cylindrically shaped, having flat bases and vertical sides, and measuring 8 to 12 inches in diameter. They are arranged purposely in multiples of three, 18 in the outermost row, 15 in the middle, and 9 in the inner row. These cup-hollows were obviously intended to collect liquid of some sort. The room may have been a place for slaughtering animals for food,

or for sacrifice, the blood being collected in the cups. It is conceivable also, and perhaps more likely, that this was a primitive press for olives or grapes. That they were sockets for poles to form an artificial underground grove, seems most unlikely. As there is no altar near, nor any trace of sacrifice in the chamber, we cannot affirm that they had a religious purpose. Nor is it at all likely that they were for collecting water. The most we can say is that it was either a place of slaughter or a press.

There is no other instance known of a cave where one room

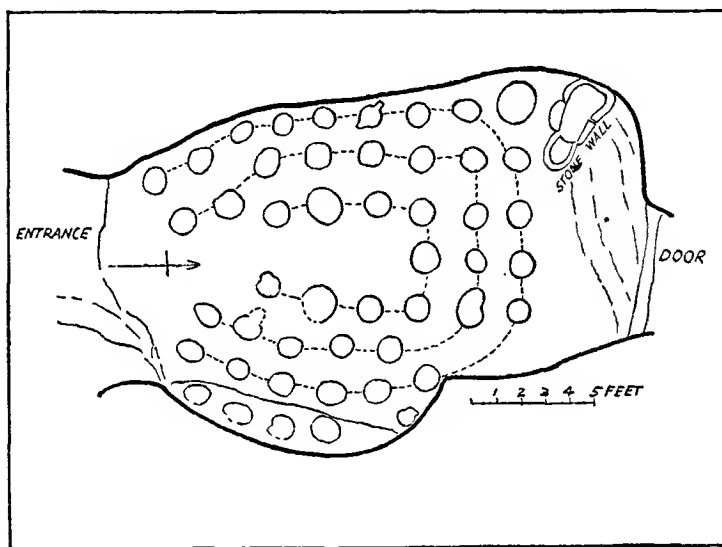


FIG. 2.—GEZER CUP-HOLLOWS, CAVE 28, II, ROOM I.

has such a series of cup-hollows, but isolated hollows and even isolated groups¹ are found in various other caves, where it is equally difficult to understand their purpose. Single cups or even small groups were very likely used in place of the later pottery ring-stands for jars with pointed bases to keep them erect. That seems practical, and it may be that this room was some sort of store, or an oil or wine cellar for such jars filled with wine or oil. But it would have been so much easier to make cups of clay for such a purpose. The room retains its secret.

¹ See *Gezer*, Cave 30, IV.

There were other four cups on a ledge in the eastern extension of this room, quite separate from the large series, which may seem to favour the idea of a cellar or store-room.

Three rooms (Nos. 2, 3 and 4) run due west from this room, connected by tunnels. The tunnel between Rooms 3 and 4 had been cut from both ends. Where the workmen met in the centre of the tunnel, the hole left is only 15 inches wide and 26 inches in length. No man of any size could pass through it.

Another peculiarity is that this tunnel ascends in level and opens into Room 4 at 9 feet above its floor level. It may be that Room 4 was greatly deepened when it was afterwards made into a cistern, but there is a surface entrance with a stair cut in the rock winding round its sides, and this seems to belong to the cave-dweller period. Perhaps this was the hall where the congregation met to receive oracles from their god. The oracle spoken in Room 3 by a confederate of the priest could be heard in Room 4, through the tunnel. These raised passages and high entrances are a problem in other caves. It is possible that they were traps for pursuing enemies.¹

These four chambers seem to have served a religious purpose, and it is curious that, while the other six were later used for burial, these were never defiled. One of them (No. 2) had been used about 1500 to hide away a quantity of valuables of Egyptian origin.

ROOMS 5-10

A tunnel 75 feet long running due south connects Room 2 with the other six rooms. This tunnel had also been cut from both ends. At several points the south workmen nearly ran their tunnel to the outside face of the rock, and when the two parties met, the southern section was several feet below the level of the north section. They joined the two by a narrow vertical hole, which is not easy to negotiate. If the members of the family in the southern caves wished to visit those in the north, it must have been a perilous undertaking. It was fortunate that they had external entrances cut in the rock face as well.

The tenth room consists of a series of bays, and it is also

¹ Cf. Caves 19, III, and 18, I, linked by a twisting passage; see chapters on "Religion," and "Caves of the Shephelah."

difficult to get into. It may have been a place of refuge to flee to in an attack.

The tunnels are a problem difficult to solve. It is so hard to pass through them, that they can hardly be regarded as ordinary thoroughfares, yet there were only narrow tunnel entrances to Rooms 8, 9 and 10 at the south end.

It is quite clear that the cave-dweller was a man of small stature. Evidence from other sources gives the average height as 5 feet 3 inches. The pottery found leaves no doubt that this underground village or fort was occupied by the cave-dwellers. At later dates some of these chambers were adapted to serve as cisterns and otherwise altered.

GRAFFITI: RUDE DRAWINGS BEARING ON THE HABITS OF THE CAVE-DWELLER

Gezer Cave 30 IV¹

Cave 30 IV is interesting on account of the series of cup-hollows at its mouth, as well as in its interior; but it is still more interesting on account of the rude drawings or Graffiti scratched on its walls. These throw some light on the life and habits of the cave-dweller.

To a height of 4 feet the walls of this cave are rough, but above this is a frieze of smoother surface, which is filled with rude drawings and scribblings by the occupants of the cave. There are a few also on the roof (G. III, Pl. 46-48). These are of three classes:

1. Some are mere scribblings of lines running vertically or horizontally, and sometimes crossing.
2. Others are arrangements of dots, round punch-holes, a square of four, or a row of three, with a circle of punch-holes surrounding them.
3. Others are crude drawings of animals—a rectangle for the body, four lines below for legs, and one above for neck and head. Some, however, show much greater skill.

Of these, the most interesting are No. 44 (G. III, Pl. 47), and Nos. 48-50 (Pl. 48). The first (No. 44) is a picture of an animal among reeds, shot by an arrow; the bent bow is depicted, not the hunter. The second shows a man ploughing with a pair of oxen, or buffaloes presumably, though the horns

¹ See under Cave 30, IV, "Religion," Vol. II.

on one more closely resemble antlers. The plough appears to be the same simple implement which is still in use in Egypt and Palestine. The man's figure is rudely drawn and wears no garment. The upper part of this picture is the artist's first attempt, perhaps, which he left unfinished and partly scribbled out, but it shows how the yoke passed over the

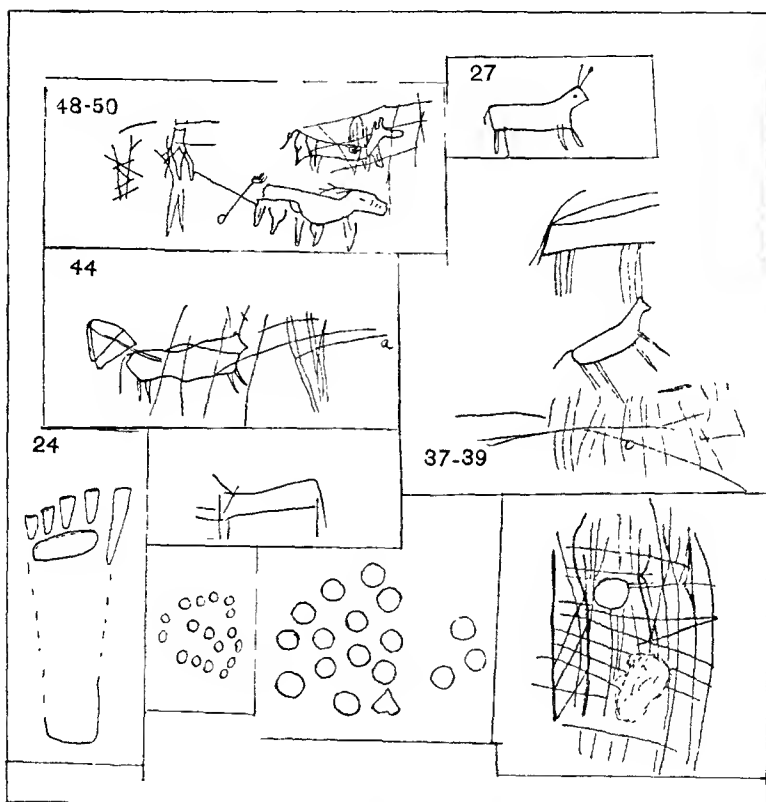


FIG. 3.—GEZER CAVE DRAWINGS.

animals' necks—unless it is meant as the second animal of the pair driven by the man. This is very likely, for a line passed from nose to nose.

These two indicate that the cave-dweller was a hunter and a farmer as well. Had the artist shown a little more detail we might have known also what he hunted, and what game or

wild animals infested the country then. In Fig. 44 the animal is scarcely what I should describe as a deer.

No. 27 Macalister thinks is a "fine cow" (G. III, Pl. 46). The drawing is superior to the others. Nos. 37-39 (Pl. 47) are similar attempts, the middle figure being the same as No. 27. The under figure is hid in long undergrowth. None of the drawings is very helpful as indicating what domestic animals they kept, or wild beasts they hunted. They do not resemble very closely any animal known to me. It is pretty obvious, however, that sheep and horses are not depicted.

The obliterations are a problem, and Macalister points out that they cease at No. 24, which is a fine drawing of a foot (Pl. 46). This drawing is so superior to the rude sketches around it that one feels it must be of later date. The separated toes with square ends so much resemble Egyptian technique, that it has been suggested that this sketch belongs to the Egyptian period of occupation, in which case the cave must have been accessible at the date of the Egyptian occupation, 1450 down to 950.

The punch-holes remind us of the punch-hole decoration so common on the Neolithic pottery.

Similar graffiti were found on quarried blocks at Samaria, which the excavators are positive "were contemporaneous with the masonry" (palace of Omri, N. wall of Court 7), and would thus date at 900, but these graffiti at Samaria may have been on the rock surface before the blocks were quarried.

A MASSACRE—1000-600 B.C.

Gezer Cave 8, I.

This cave was twice discovered and converted into a cistern, first by the Canaanites after 1400 B.C., and later by the Hebrews. In each case, a new opening was made in its roof.

It is interesting for two reasons.

A great heap of bones of human beings, sheep, cows and goats had been thrown in and lay under the southern shaft, and large stones had been thrown in to form a cairn over them. There appears to have been here a "massacre" like that of Achan (Jos. vii.), or perhaps the pit was used as a prison, like that of Jer. xli. 7, for getting rid of troublesome people. This "massacre" belongs to the Hebrew period, 1000-600,

and recalls the similar mass of human bones found recently, in a sealed cistern at Tell-en-Nasbeh (Mizpah), which is dealt with in a later chapter.

Among the pottery in this cave were found fragments of a very fine homogeneous hard-baked ware of an olive-green colour, almost as thin as an ostrich egg-shell. The only other examples I know of this ware were found by Petrie at Gerar. It very closely resembles Assyrian ware. Petrie regards it as pottery brought from Assyria by an Assyrian governor or officer about 800-600 B.C.

The "massacre" may, therefore, be connected with an Assyrian invasion of that period, and this pottery, which is not Palestinian, will have been brought to Gezer by an Assyrian officer or governor. Fragments of thin ware very much like this frequently turned up in my excavation of the East Wall of Zion on Ophel.

Caves 19, I, and 27, I, both afford evidence for dating. The mouths of both are built over by the inner city wall of Gezer, which is dated not later than 2500. The pottery in the caves is indisputably early, of the cave-dweller type, and included a series of small cord-eye handle jugs covered with a basket pattern of red lines. In Gezer Cave 27, I, the human bones found had been thrown in by the builders of the wall.

Many of these caves at Gezer contained flat pieces of bone with triangular points, sometimes called *styli*, for cuneiform writing. This may be correct, but the cave-dwellers must have used them not for writing, but in net-making or incise decoration of pottery.

UNDISTURBED CAVE DWELLINGS AT GEZER

G. Cave 30, II. Cf. Cave 7, II.

As most of the caves examined in Palestine have been occupied more or less continuously for some thousands of years, it is natural that we should find only the latest occupation fully represented. Traces of previous occupation are more or less obliterated, and the Neolithic, occupying as it does the lowest stratum, has suffered most of all.

Cave 30, II (Gezer I, 143), contained no evidence of occupation later than Neolithic times. We may, therefore, regard it as an undisturbed troglodyte dwelling. Yet it contained

no complete vessels, though many sherds of very early date, and flint knives. Nor were there any bones. These sherds (G., Pl. 44, 1-6) are all Neolithic ware. There were sherds with lines painted black on a brown ground, vessels decorated with red drip lines, and plain yellowish brown ware—a loop handle 7 inches long and $1\frac{1}{2}$ inches across. More

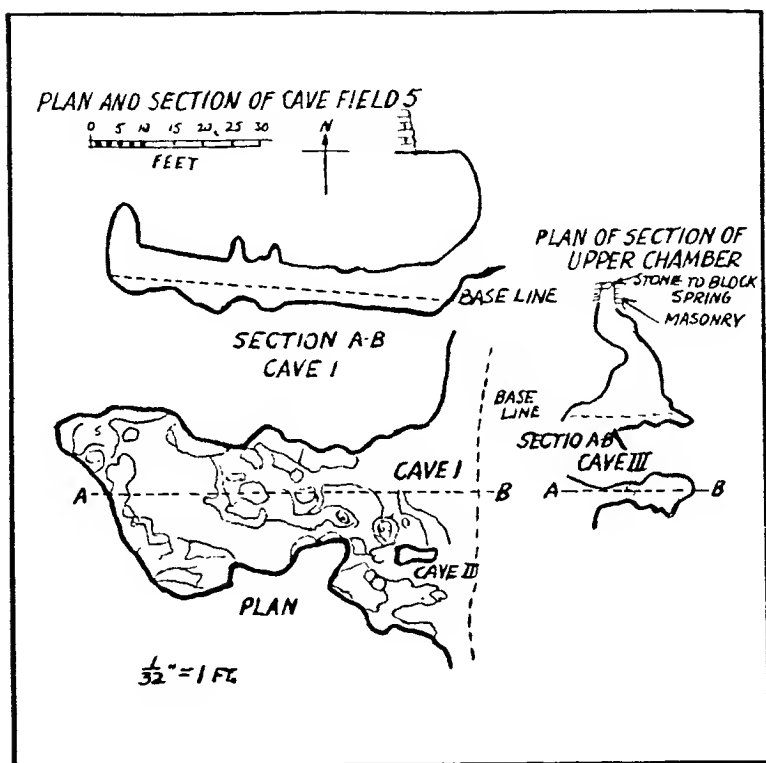


FIG. 4.—PLAN OF CAVE, OPEL.

interesting still was the horn of a buffalo, so the animals on the graffiti of Cave 30, IV, were probably representations of a buffalo, the only animal which they at all resemble.

This cave was entered at the east end by a badly made and awkward stair. The main room is over 30 feet long, and the roof maximum height over 7 feet. There is a raised platform on the left, just inside the entrance, with two pits in front of it,

one 18 inches and the other 6 feet deep. These seem to resemble the pits in the floor of the cave on Ophel next described.

There is only one other room, a small one on the north side, ending in a short cul-de-sac tunnel— $5\frac{1}{2}$ feet long, and $2\frac{1}{4}$ feet in height, 14 inches of this being under the level of the cave floor. This may have been a grave.

THE LARGE CAVE UNDER ANCIENT ZION

This natural cave is a large tunnel 75 feet long and about 20 feet wide. The innermost recess is circular, about 30 feet across, and the roof is about 6 feet high.

The interesting features are the cuttings in the floor, the funnel, and the pottery and burials found. Three cuttings near the entrance had been graves for contracted burials and measured 3 by $2\frac{1}{2}$ by 2 feet. A similar grave was found in the small adjacent cave, II, containing a Neolithic burial with cave-dweller pottery.

The largest cutting, near the inner recess, was over 8 feet wide and $4\frac{1}{2}$ feet deep. This roughly cut pit contained a quantity of the gritty clay used by the cave-dweller in making pottery, and beneath the clay were fragments of cave-dweller vessels. The pit had been the workshop where the women modelled their pottery. The small adjacent cave had been used as a burial-place. Its floor was strewn with bones of bodies simply thrown into it. The people buried in the small rock-pits had been chiefs or heads of the family. The cave-dweller thus seems to have lived in one end of the cave, and buried his dead in the other end.

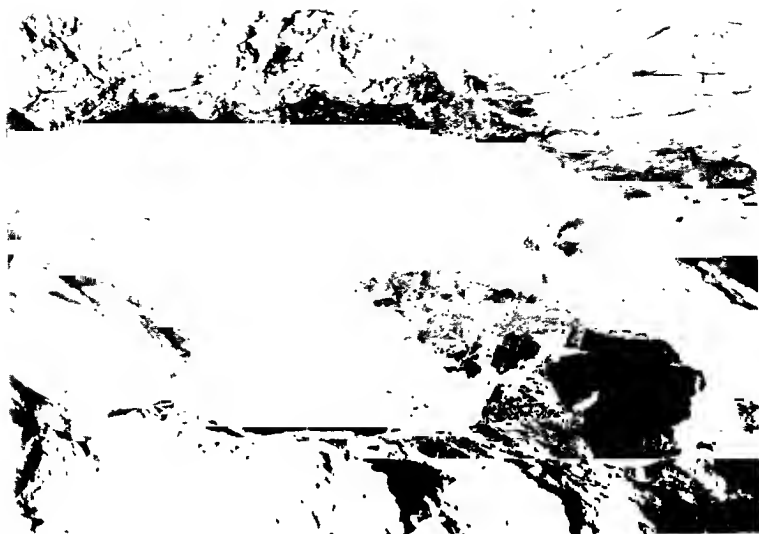
The funnel at the inner end had perhaps been the original and only entrance. It is 16 feet deep to the floor and leads up almost vertically to the rock surface. Its lower end is 10 feet above the floor, and it is wide enough to allow one man to pass through it to the top. It had been kept open to a late date, for, as the debris accumulated inside the City, they had raised the mouth by masonry, the blocks of which lay visible from inside on the top. The funnel had thus been a sort of secret entrance into or from the city, and the Jebusites had probably made the eastern entrance to the cave when they scarpd the rock-face below their city wall. This funnel was blocked up by the late sewer which passes over it in Field 7,



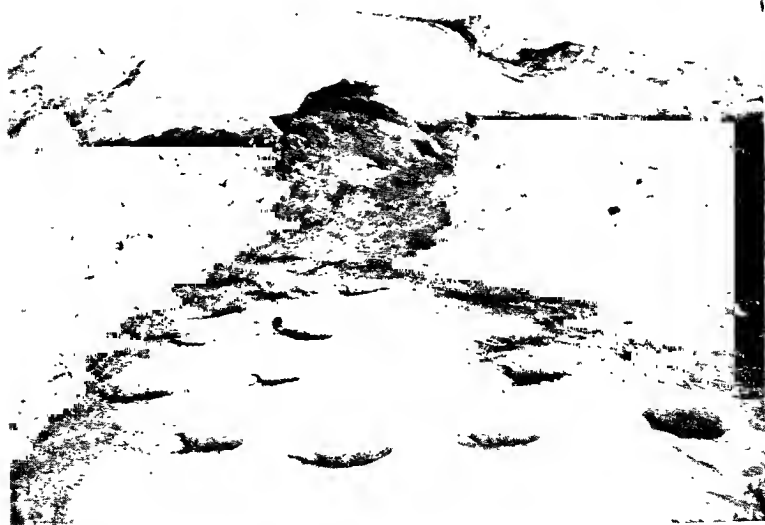
LARGE CAVE, OPHEI —ENTRANCE



LARGE CAVE—SHOWING BURIAL PITS ON FLOOR



OPHEI—LARGE CAVE UNDER ZION—INNERMOST ROOM



CUP-HOLLOW'S CHAMBER—GEZER CAVE—IS II

and is still in use. Water from the sewer oozed into the cave, and potsherds were found caked in mud.

I have an almost firm conviction, and it is at least a probability, that this cave with its funnel entrance from within the city, and its eastern exit right above the spring Gihon, may have been the *tsinnor* or gutter of 2 Sam. v. 8 (1 Chron. xi. 6). Macalister suggests¹ that the Arabic word *tannur* is this word *tsinnor* adopted and given the meaning of the word nearest to it in sound in Arabic. Moslems have a tradition that Noah's flood sprang from a *tannur* or "baking-oven," or cave used for some burning purpose or shaped like an oven with a funnel. *Tsinnor* may thus have meant a cave with a funnel exit.

This opinion is strengthened by the fact that a few yards south of the eastern entrance to the cave I found a large Davidic repair in the Jebusite wall. At the point where this repair stands, the Jebusite wall receded and left a ledge of flat rock 30 feet wide, and of considerable length, on which a large number of men could find footing for an attack. This section of the wall had always been a favourite point of attack. I found two Solomonic repairs there also. It was probably for this reason that the second or outer wall was built by Hezekiah. This is a far more likely point of attack than the point in the supposed north wall where Macalister has located his "Millo." There David had an outer wall and an inner wall with a valley of considerable depth between them as obstacles. Here he had an excellent footing, and only one wall to break through, and here it appears that he did ultimately break through, for he afterwards repaired it. But it was no easy task, and this breach led only into the lower part of the city.

Joab may have entered this cave by night and climbed the funnel which led into the heart of the stronghold or citadel proper. For the city apparently consisted of a lower city and an upper city or citadel. David forced his way into the lower city, but could not take the upper one. Judas Maccabæus later had the same experience.

It may be said that the Jebusites would have been on the watch for such a contingency. The same may be said of the other theory, that Joab entered the city by the tunnel from the Gihon spring. The surprise for the Jebusites consisted in their not expecting a night attack, not in the point of attack.

¹ In *Gezer* I, 264.

This also fits in with Josephus' story that David took the lower city but failed to take the citadel proper. The breach which he made a few yards south of the cave entrance, and afterwards repaired as I found it, led into the lower city. The funnel of this cave would have led Joab right to the centre of the Field 7 which we excavated, and so right inside the citadel or upper portion of the city. In fact, this funnel and cave were probably used as a direct communication between the upper part and the outside of the eastern wall. The tunnel and shaft from Gihon, on the other hand, led only into the lower part of the city.

The next occasion when it is possible that this cave and funnel played a part was in 597, when Nebuchadnezzar forced an entrance and took the whole city. Zedekiah's soldiers, when the city was broken up, "fled by night, by way of the gate between two walls which is by the king's garden" (2 Kings xxv. 4). These soldiers were in the citadel proper. By this time the outer wall, which I found and attribute to Hezekiah, had been built. "The way between two walls to the gate beside the king's garden" must have been this passage, 27 feet wide, between Hezekiah's outer wall and the old Jebusite wall. But I have always been puzzled to know where or how the garrison of the citadel found their way down to it. It may be that they escaped by this funnel entrance into the cave, and from the cave into the passage between the two walls, which led straight to the Fountain Gate by the king's garden, at the south end of the city.

There is also the possibility that this cave and funnel were connected with the cup-hollows and rock cuttings on Field 7. The orifice of the tunnel opened on to the centre of these cuttings, close to what I suggested had been a "crematorium" or a high place of sun-worship. The modern sewer in this field made it impossible for me to search for the upper end of the funnel.

The funnel, though an awkward entrance to the cave, is quite wide enough for men to pass through singly, and the drop to the floor is quite easy. Half-way down the funnel there is a ledge which makes it still more easily negotiated.

Cave-dweller ware, flints and other relics found in the lowest strata and in the graves prove that it was occupied or in use in Neolithic times. The beautiful painted ware found in it by Captain Parker and published by Vincent is Early Bronze

Amorite ware dating not later than 2500-2000. This pottery in itself proves that the Amorites occupied Ophel before 2000, and they had used the cave, perhaps, for burial or for religious purposes.

The burials are discussed elsewhere.

This cave had all along remained empty. Captain Parker's men told me it was empty when he found it in 1910, but the floor was a mass of beaten dung of sheep and cattle. In excavating a tunnel past its mouth, Parker filled the cave with the debris of his excavation. It was in his filling that I found the potsherd bearing a Hebrew inscription (see Inscriptions). Apart from the points mentioned, the cave supplies no further information of the cave-dweller's furnishings or mode of life.

THE PALÆOLITHIC AGE

Cave at Et-tabigha

This cave is situated on the western shore of the Sea of Galilee, quite near to the modern Hostel at Et-tabigha, and is of interest mainly because here in the lowest strata Mr. Petre found the skull of a cave-dweller of the Palæolithic Age.

Other discoveries of Palæolithic remains have been found recently near Ramallah by a lady student of the British School of Jerusalem, but our knowledge of that period is very scanty.

Apart from this skull the only data we possess consist of a few Palæolithic flint tools and weapons. These of themselves point to a period of cave life and a race of cave men existing many thousands of years before the period to which we usually assign what we regard as the relics of the Neolithic cave-dweller. Doubtless future investigation will carry our knowledge back through these many centuries, though we shall probably never be able to speak of dates and periods, except in the vaguest sense.

KINISIT SARA : "THE CHURCH OF SARAH"

Kinisit Sara is a cave near to Es-Salt in Transjordan, which has been converted into a Byzantine church. The front has been quarried away, and finely built Byzantine masonry with a door in the centre substituted. The original entrance is thus abolished.

Conder¹ speaks of the "castle" of Salt as a Crusaders' fort, but says that Salt must have been a Christian town "at an earlier period than the twelfth century, for there is a rock sepulchre in the valley to the south-east which was converted at one time into a Byzantine chapel with frescoed walls, while some of the tombs here appear to belong to the same period—the fifth or sixth century A.D." This "Byzantine" chapel is on the slope facing Neby-Jadur on the right of the road to

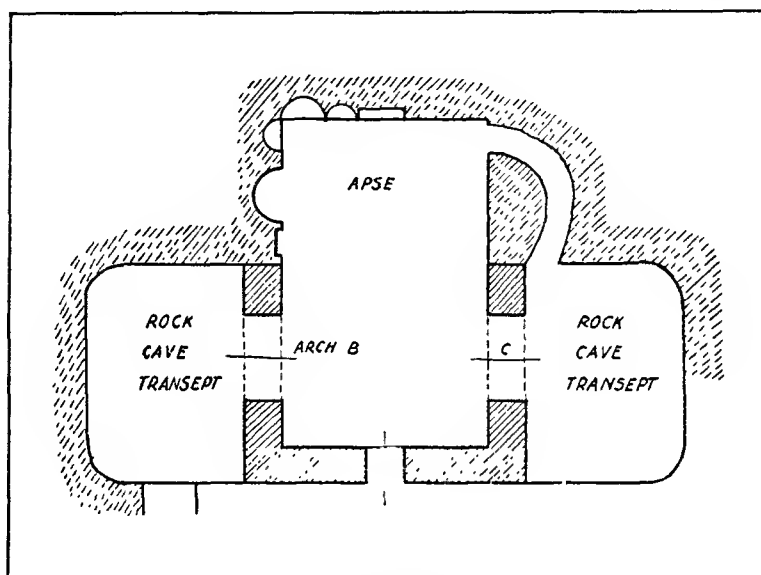


FIG. 5.—KINISIT SARA PLAN.

Amman, just a quarter of a mile from where it leaves the Salt road.

Tradition says that an Egyptian princess named "Sarah," repenting of her sinful life, came here to live in retirement and built this chapel as an act of penitence. Hence it is known here as Kinisit Sarah, "the Church of Sarah."

The large cave-dwelling originally consisted of a central chamber at least 33 feet from front to back, and 18 feet wide. On each side there was an almost circular cave chamber much more roughly cut, measuring about 17 to 18 feet in diameter.

¹ *Heb and Moab*, p. 189.

The right-hand or south cave had been connected with the central chamber by a tunnel cut in the solid rock, measuring roughly $6\frac{1}{2}$ feet high, $2\frac{1}{2}$ feet average width, and 13 feet long. This tunnel runs in a sort of curve from the extreme right-hand corner of the central chamber.

On the innermost or east wall of the central chamber a square cupboard was cut in the centre, and to the left of it are two recesses or cupboards with rounded tops, while on the adjacent north wall are two more cuttings, one of which is probably the beginning of a tunnel entrance to the north side chamber.

THE BYZANTINE CHAPEL

The Byzantines excavated the floor of the cave to a depth of 5 feet, leaving a platform at the inner end 12 feet broad and 5 feet high. They cut away the front and the roof of the central cave entirely, and built a fine front wall with a high barrel-arch roof of excellent masonry. The front wall is over 23 feet long, 20 feet high, and $2\frac{1}{2}$ feet thick. The fine door is in the centre, and the carved lintel is 86 by 26 by 20 inches.

New entrances were cut to the side caves from the central chamber and walls of the same finely dressed stones built in. In the centre of each of these side walls is an arch leading into the side cave behind it. Each arch measures about 8 feet broad at the spring of the arch, $4\frac{1}{2}$ feet high from the keystone to the present floor, and the masonry of it is 39 inches thick.

Thus, by the building of a front wall and two inner side walls 19 feet long, and the addition of the vaulted roof, the cave has been converted into a chapel with 12 feet depth of the original central rock-cut chamber to serve as apse, and a cave on each side to serve as transepts. The nave could not be prolonged to complete the cross, because it stood on the very edge of the cliff, and thus we have a chapel with the nave ending in line with the transepts, quite a common thing.

The portion of the ancient rock-cut chamber which plays the part of apse is square cut and measures 18 feet broad by 12 feet deep with a roof 10 feet high. Its roof is thus some 5 or 6 feet lower than the vaulted roof of the nave. It contains the square and rounded niches mentioned above. These, of course, had been shelf cupboards when the cave was a dwelling, but the square one in the centre of the wall (which

measures 3 feet 10 inches across, $3\frac{1}{2}$ feet high and 12 inches deep) may have served as part of the altar or reredos.

Two feet in front of it there is visible the first step of a rock cut stair, 2 feet wide, that led down from the apse to the floor of the nave, and it is noteworthy that the builders have left the floor of the apse at least 5 feet above the level of the floor of the nave.

It must have been quite impressive to sit in the nave looking into an oblong apse, which looked like a platform 5 feet high approached by a stair in the living rock.

The floor of the apse and that of the nave are now on the same level. The floor of the nave is full of graves. The steps down are buried. The floor of the apse is, however, solid rock. In the nave the door is now only 4 feet 3 inches in height. The arches leading into the transepts are buried up to the spring of the arch, and the keystone is only 4 feet 6 inches above the present floor level.

Thus we may assume that both door and arches have been buried by accumulated material to a depth of 5 feet. The floor of the apse must, therefore, have been 5 feet above the floor level of the nave.

The transepts have also been filled up to the same depth. They are still about 7 feet high from floor to roof, and must have been originally 12 feet at least in height. The south transept is littered over with pieces of wooden coffins and heaps of human bones. The space for burial is so limited that when a fresh burial is required, they simply unearth a previous interment, throw the skeleton and coffin into this transept, and reuse the grave.

A noticeable feature of the front entrance is its massive lintel. It is one block measuring 86 inches long, and has two sockets or hinge-holes measuring about 3 inches and 5 inches across, one at each end. The door must have been a twofold stone or wood door, with round pin-hinges fitting into sockets in the lintel and in the threshold, which is buried. This is exactly what we find in the best Hebrew tombs. This was very probably a Hebrew tomb before it became a chapel, but the interesting thing is that this lintel must have been cut out of the solid rock from above the original door of the tomb, and reused in the stone wall in the Byzantine era. The tunnel passage evidently belongs to the original cave-dwelling, and was not cut by the builders of the chapel.



OUTSIDE ENTRANCE TO KINIST SARA CHURCH OF SARA



NORTH ARCH—INTERIOR OF CAVE. KINSHI SARA AT 45 S.M.L.

The chapel measures 21 feet from the door to the back of the apse, and is about 52 feet across the transepts. The nave measures only 18 feet from the front of the apse, and so the chapel is out of proportion. It is, however, correctly oriented.

Of the frescoes mentioned by Conder, only one fragment beyond the left arch remains, measuring about 4 feet high by 3 feet wide. The picture was painted in the reddish brown paint so common on Arab and early painted pottery on a smooth white plastered surface. It represented two figures with aureoles standing facing each other, but is now so defaced that the details cannot be either drawn or photographed.

The portions painted are on a level with the upper parts of the arches, or about 6 feet above the original floor level, and only these portions were plastered.

Just alongside the remaining fresco is a sunk niche which had been made apparently for the reception of a dedicatory tablet. Very likely this tablet recorded the building of the chapel and gave the name of the builder. Probably it has been used to build some of the stone tombs of "strangers" outside, for it is now the burial-place of the Greeks and other strangers; the people of Salt are hill-folk, true descendants of the Amorites, and evidently very exclusive.

I have found no trace of Egyptian art or influence in the building, but the frescoes might have supplied such evidence. It is impossible, therefore, to say whether there is any truth in the traditional story.

We found four or five crosses of different shapes incised on the stones of the masonry.

The cave was, I think, originally a rock-cut dwelling of three chambers, two of them connected by a rock-cut passage. It had been intended also to cut a similar passage into the third chamber on the north side, and the work after proceeding so far was stopped; perhaps it was easier to enter from the front outside or from the side of the central chamber.

Later on it was used as a Hebrew tomb, but there are no traces of *arcosolia* or *kokim*, or troughs for burial. These may all have been cut out to extend the chambers.

The niches are the only inside cuttings visible, except that on several parts there are small niches cut later for the reception of *seraj* or oil-lamps, as the Arab boys with us promptly pointed out, and as the smoke marks show. It is quite possible that there may be coffin-chambers in the transept-caves underneath

the 5 feet of rubbish. This can only be verified by excavation. There certainly were none in the "apse" portion. I found no tombs near that could be assigned to the fifth to sixth century A.D.

THE TRADITION

The tradition that a princess, named Sarah, from Egypt, having made some great mistake in her life, came here in the early Christian centuries and built this chapel as an act of penitence, may embody a very much earlier one. "Sarah" is a Hebrew word meaning a princess. It is also an Arabic name for a woman. The original tradition is therefore really connected with either a Hebrew or an Arab lady, whose name was Sarah.

There are two or three explanations which I can think of.

Gilead was Jephthah's country, and it was with the Ammonites that he warred. There is a cave some distance north of Mahneh, named *Mughara Muftah*, which is believed to mean "the Cave of Jephthah," and is regarded as the site of Mizpeh, where Jephthah lived. Pastor Nikola of Salt mentioned this to me. This tradition about the Hebrew "princess" may therefore quite conceivably be a reminiscence of the fate of Jephthah's daughter, referred to in Judg. xi. 37-40.

Another possibility, suggested to me by Mr. Avinoam Yellin of Jerusalem, is that the tradition really refers to Sarah, the wife of Abraham, and indicates that, when she returned from Egypt, she retired to this cave and lived in seclusion for the recognised period.

There is also the possibility that the name and tradition are of much later origin. It may well refer to some Christian saint who was buried there, the details being inscribed on the missing tablet.¹

ARTIFICIAL CAVES—GEBEL HOSHA

There are three artificial caves side by side in the rock on Gebel Hosha (Transjordania), which I have described in the *P.E.F. Quarterly Statement*, October, 1927.

¹ It is quite possible that the walls of the niches or cupboards in this cave had been frescoed in Byzantine times as in the ruins of Deir Mukelik, the convent of St. Theodotus, some ten miles east of Jerusalem. This is described by D. J. Chitty in the *P.E.F. Quarterly Statement*, July, 1928. The convent dates about A.D. 411.

These are interesting as showing how the cave-maker chose his ground. The rock strata here are all very shallow, sometimes only 3 to 4 inches thick, while the intervening spaces are filled with loose rubble. This the cave-maker discovered before he had proceeded far with his staircase entrance. It formed, therefore, an excellent spot for an artificial cave-dwelling, being so easy to excavate.

These three caves seem to have been originally entered only from the surface. A fine staircase of nine steps cut in the rock leads to the middle cave. The surface opening was an oblong, and a stone slab fitted into it exactly. The front of all three caves has long since been cut away, so that they are now open in front through their whole length, and used as shelters for flocks or passing caravans.

If there was a staircase leading into each chamber, two of them must have been cut away. It is far more likely that there was only one staircase entrance, and the rooms were connected by passages or doors cut through the rock partitions.

The western chamber is of great size, almost 40 feet square. The roof is a rock stratum over 24 inches thick, and no pillars were left to support it. The other two chambers are much smaller. These caves are filled with earth and rubbish to a very considerable depth, but the roof is still 6 to 8 feet above the floor.

CAVES IN THE SHEPHELAH

In the hill country of Palestine the caves are mostly natural, and artificially enlarged. In the Shephelah or maritime plains they are artificial. At one period the Shephelah was occupied by a people who devoted much time and energy to carving the soft chalky hillsides into large caves, sometimes single chambers and sometimes many-chambered.

The district around Beit Jibrin is the nucleus where this energy concentrated itself, but caves of the same style and magnitude are found even 10 miles from this town. Tell-Sandahannah conceals under its surface no fewer than 400 of these underground cuttings in 60 different sets, some of them even 40 to 50 feet in diameter. The method of excavation and the plan of the chambers are so regularly followed, that it is unnecessary, even were it possible, to give more than a general outline and classification.

Macalister classifies those which he studied as follows :

1. Bell-shape (bee-hive) chambers with roof-hole entrance.

The floor is almost circular. The sides bend inwards to form a dome. In the centre of the dome is a hole, which is the only means of entrance. When the chamber is deep underground the roof-hole becomes a circular shaft. Entrance can only be made by a rope or ladder. No ledge, no step, or platform to facilitate access was provided.

These vary in height from 5 to 33 feet.

2. Bell-shape chambers with a *side entrance* on or near the floor level, which either leads to the outside or to more chambers. These retain the roof entrance, but where the side entrance leads outside, this is generally closed with boulders, with earth on the top to conceal it.

In these cases, the roof-hole was probably used only for the removal of the quarried material in making the cave, and was stopped by the makers. The fact that in multiple-chamber caves many chambers have this hole closed up, while the door in the side is the only entrance left, seems to prove this. Some have both roof-hole and side entrance open. Some have the roof-hole as the only entrance from outside, and a side entrance leading to other rooms. Some have side entrances from outside, and roof entrance blocked, and others have a two-hole entrance in the roof.

3. Bell-shape with *roof-hole entrance only*, and a *staircase* running spirally round the sides from the roof-hole to the floor. These are generally of larger dimensions than those without stairs. The largest single-chamber cave examined by Macalister (one at Khurbet el-'Ain), 40 feet in diameter and 60 feet in height, belongs to this class.

There is a great variety of the staircase bell-shape caves. Often side entrances to other rooms, or exits, lead off the stair at a considerable height above the floor. Sometimes the stairs run regularly round the wall, or, as in the example quoted from Khurbet el-'Ain, they recurve on themselves.

Sometimes the stair stops at a height of 10 feet from the top, and in one case it ceases some distance from the floor.

In almost every instance at Tell-Sandahannah rock-hewn parapets are provided along the outside edge of the steps as safeguards. These average 6 to 8 inches in thickness and about 30 to 40 inches in height. Their tops are also stepped to follow the line of the staircase. In one case, where the stair crosses the opening between two adjacent bell-shape

chambers, a parapet is supplied at each side. Of 100 bell-shape caves at Tell-Sandahannah, only 12 have not got parapets, and these parapets so far have been found nowhere else. Why they should have been provided only at this one place, there is nothing to show. It is difficult to explain why so useful a protection was not provided in all the spiral staircase caves.

4. The circular shape is not universal. Round-roof chambers with staircase entrance occur, which are oval or square.

5. Many chambers are rectangular, with vertical walls and flat roofs. These are usually connected with others, but a fine example of a single rectangular chamber of this type was found at Khurbet el-'Ain.

6. Many are so irregular in shape that they cannot be classified.

7. When the floor was so extensive that there was danger of the flat roof falling in, *pillars* were left to support it. These pillars are square, or elongated ovals in shape.

Where square, the pillars are generally single, standing in the centre of the chamber, or, if many, stand in a row or in an irregular group near the centre.

The oval pillars are generally arranged in a rough circle concentric with the sides of the bell-shape chamber, their long sides being in the circumference of the circle which they form, and the chamber thus consists of a central space with an aisle running round it.

8. Cells or small chambers frequently open off chambers of large dimensions. These cells may be of any of the shapes detailed above, and usually are not more than 6 to 7 feet wide. Sometimes a side door and sometimes man-holes in the floor lead to them.

There is very little indication of what the above types of chambers were used for. They may have been used as dwellings, or store-chambers, cisterns, or secret places of refuge: but there are some types of chambers which seem to reveal the purpose for which they were made.

There are five of these—viz., columbaria, olive-presses, filter-chambers, one instance at Tell-Sandahannah of a stable, and one at Beit Leyi of a Christian chapel like Kinisit Sara, at Es Salt. These mostly fall to be described under other heads.

Tunnels.—In these systems, the chambers sometimes com-

municate with each other by a mere man-hole or a door in the wall, or by passages. Some passages are short and serve merely to connect two rooms. In other systems there is one long tunnel or system of tunnels, with small chambers opening off them. These tunnels are like the street of an underground village. The longest measured was over 96 feet, but another was probably 116 to 120 feet long, while some were not more than 3 to 4 yards in length.

There is the same variety in width and in height. Some can be traversed upright and with comfort: others can only be crept through, and one was so small that a native declared he had to strip to get through it, which was doubtless due to accumulation of debris. Many, however, are so small that only boys could have excavated them.

Sandahannah supplied only three instances of creep-passages, but several examples of galleries or tunnels on a large scale, one of which zigzags at right angles, perhaps to baffle pursuit. In some many-chambered systems the tunnels begin at an obscure corner of the system, and end high up in the wall of a large chamber (*cf.* in Room 4, Cave 28, II of Gezer), so that a long ladder is needed to get to the floor (raised passages are discussed elsewhere, see p. 49).

SOME FEATURES COMMON TO THE SHEPHELAH CAVES

1. *Marks on Walls.*—Marks on walls are of frequent occurrence. These are either tool-marks, ornamentation, graffiti, Christian and non-Christian symbols, marks of woodwork or niches of various types.

Tool-marks often indicate the methods used and directions followed. Here metal chisels were chiefly used, but wooden tools may also have been employed in some cases.

Niches cut in the wall to hold lamps are quite a common feature in caves and tunnels. Usually they are triangular, and very likely they were made by the quarriers for oil lamps to light them at their work, as many niches are far too high in the wall to be of any use for those living on the floor level. The irregularity of their position also points to this. New niches were made as the tunnel deepened. Most of these niches were small, but larger niches with two cups side by side cut in the base of them were also found. These cups were, I think, probably substitutes for lamps, holding the oil

and the wick, or they were for holding lamps as Macalister suggests, being too small for any other purpose.

What Macalister calls the pummel niche, with a pummel or blunt point in its base, may be simply an unfinished lamp-niche. The bridged niche, however, is different. A bar was left in the centre of the floor of it, the niche being hollowed all round the bar. As some of these bars were chafed by cords, they must have been used for tying things to.

Wood has, of course, disappeared, but mortices and sockets made to hold beams in position show that wood was used for partitions or scaffolding. Macalister found only three instances. Bolt-holes and other cuttings for fastening doors also occur.

Symbols.—The swastika surrounded by a spiral occurs at Khurbet el-'Ain, and at Zakariya two marks which may be symbols. Christian symbols are, however, of frequent occurrence. These are either crosses or figures with outstretched arms, which may represent the Crucifixion or people in the attitude of prayer. At Beit Leyi there is said to be a figure of a woman with a child in her arms—the Virgin and Child—in some one of the caves. Graffiti occur in the many-chambered cave at Zakariya, at Tell-Sandahannah in Greek, and in some caves near Beit Jibrin in Kufic. At Sandahannah also there is a rude human figure at the entrance of one cave. The well-known friezes in 'Arak el-Kheil are the only example of cave ornamentation so far known.

Windows.—Windows are often cut in the rock partition between the two chambers.

Cup-Hollows.—Cup-marks are frequently found close to the roof-hole entrance of these caves—especially at Zakariya and Sandahannah, where single cups often occur close to the mouths of caves. At Sandahannah there is no instance of a cup-hollow that is not thus associated with a cave. The significance of this is still unknown.

Rain-spouts.—Two instances of water-grooves cut round the tops of doors to serve as rain-spouts or water rhones occur.

Masonry.—Where the excavators feared that the roof would not sustain the weight above it, they frequently strengthened the roofs of tunnels and chambers by masonry of finely cut and squared limestone blocks. These masonry roofs are built with a true arch, having "radiating voussoirs." As the arch is supposed to be unknown before 300 B.C., this serves

as a date-limit. It has, however, recently been ascertained that the arch was known and used at a much earlier date. At Bethshan the arch was in use in the fourteenth century B.C.

Vats of different sizes cut in the rock, probably to be used as stores, occur in certain caves. There is no mention of vats cut in the floor, which might have served as cisterns.

ZAKARIYA¹

The many-chambered cave at Zakariya has two large rooms or halls from which radiate eleven systems of tunnels and rooms. From the first hall there are three systems with twenty-three chambers. From the second there are eight exits leading to nine chambers or other systems. Altogether there are between thirty and forty chambers in this cave, if not more, with tunnels, passages, door-openings, roof-holes, stairs, bolt-holes, niches and other cuttings which give an idea of the amount of work involved.

The stone is chalky limestone, very crumbly and easily worked. The tools used were metal chisels or picks.

In one room (A. 7) is the non-Christian symbol spoken of above,² resembling three isosceles triangles inside each other. The same mark is found on the wall of another room (A. 17). Another room (F. 1) has a graffito on its eastern wall. It consists of rude crosses and some Greek writing, of which nothing can be made. This, however, proves that the cave was occupied by Christians at some period. The presence of plaster on some of the walls shows that these rooms were probably used as cisterns at one period.

At *Telles Safi* one single-chamber cave measured 60 feet long and 20 feet broad, but is otherwise uninteresting. The rest of the caves there are normal, chiefly one-chamber caves.

At *Tell el-Judeideh* there were none of any special interest.

Khurbet ed Druseh has a pair of bell-chambers connected, one of which has its walls pitted all over with the loculi of a columbarium. The others are not noteworthy.

Khurbet Medawwir has several. On one set of bell-shape chambers plaster full of Roman potsherds covered the walls, and on a fragment of this plaster was scratched "a rude plain

¹ *Excavations in Palestine*, p. 127.

² *E.P.*, Pl. 96, 2 i.

cross with *bifid* ends." Another system is notable only for its *open circular court* from which passages and doors lead to the other chambers.

KHURBET EL-'AIN

Khurbet el-'Ain has a series of cuttings of great interest and variety. There are bell-shape pits, columbaria, rock-hewn tombs, and burial chambers with kokim¹ which are all of well-known types.

One cave (*E.P.*, Pl. 97), an ordinary bell-shape chamber, is D-shaped and of large dimensions. It is 60 feet deep, and at the bottom the diameter is over 40 feet. There is a stair entrance. It is, however, of interest for other reasons. There are evidences of three occupations.

1. High up on the wall is carved a swastika with one arm joined to a spiral that surrounds it. The presence of this well-known solar symbol may point to an earlier occupation than is generally supposed.

2. The next occupation was Christian. There are five crosses carved on its walls, and :

3. Later still it was adapted as a columbarium. Its walls are filled with triangular loculi (see *E.P.*, Pl. 97).

There are 445 loculi in all, and some of them deface two of the Christian crosses. They are cut in the most accessible parts of the walls, which shows that the chamber was not originally intended to serve as a columbarium. For some reason or other it suddenly ceased to be used as such, for several loculi are blocked out, but had never been cut. Because of the long staircase in it, it is called by the natives Abu 'd Daraj, or Imm ed Daraj, like the Virgin's Fountain at Jerusalem, which means "the father or mother (*i.e.*, owner) of the staircase."

The finest system of underground cuttings at Khurbet el-'Ain has a central hall 47 feet long by 18½ feet wide. A downward sloping passage 22½ feet long leads into it from outside. The entrance to the hall is 5 feet 8 inches wide. With about 3 feet of earth in it, the roof of the room is still over 12 feet in height. The roof is vaulted with a slightly pointed ridge. A tunnel connects this hall with a system of

¹ Kokim are small short cul-de-sac tunnels off a larger chamber into which the dead bodies were inserted in Hebrew burial, the entrance being closed afterwards by a stone. Kokim are unknown prior to 300 B.C.

bell-shape chambers, and a short passage leads to a stair which leads to two long tunnels (see *E.P.*, Pl. 99). Altogether there



FIG. 6.—SHOWING BIFID CROSS, SWASTIKA AND SPIRAL, STAIRCASE, AND TRIANGULAR LOCULI.

are at least twenty-six chambers of various kinds in the system, with passages, tunnels, niches, etc., as is usual. Most of these

chambers open directly off the central hall. One tunnel is a "raised tunnel"—*i.e.*, it enters the chamber at a height above the floor.

The pivot-holes of one door are still visible, and there is one niche cupboard, cone-shaped, 16 inches wide at base, and 12 inches at the top and 14 inches deep. Under it excavation revealed three burnt strata separated by clay, thus indicating three different occupations. This custom of covering up a previous occupation with a beaten floor of clay I found illustrated also in Ophel. It was used also to heighten the

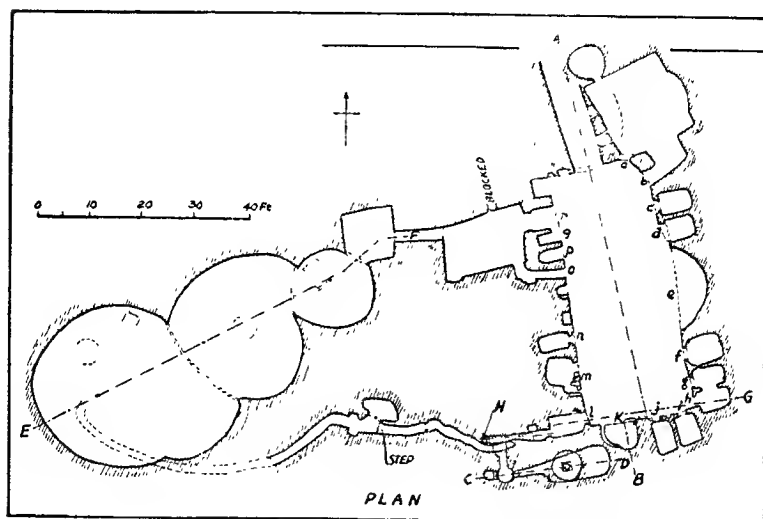


FIG. 7.—SYSTEM OF CAVES AT KHURBET EL-'AIN.

floors of houses, when they had sunk below the level of the street owing to the throwing out of rubbish on the street.

Three rectangular niches in one room (*i*) above each other, and diminishing in size as they descend, are unique. In another room (*k*), sockets for two horizontal and one vertical beam remain, but the purpose of the construction is not clear. Similar sockets in the great hall seem to indicate that it was partitioned by a structure of wooden beams.

There are two more examples of "raised" tunnels, which enter a large chamber high up in the wall, in this cave. This is one of the most interesting features of the Shephelah caves.

These "raised" tunnels were probably traps for pursuing enemies, who might thus drop into the large chamber from which they could not escape: I suggest this, but Macalister's proposed explanation I give elsewhere.

BEIT JIBRIN

The caves at Beit Jibrin are well known. One is of special interest—viz., 'Arak el-Ma—because of two figures, side by side, carved high up on one of its walls.

These have outstretched arms and are regarded as representations of the Crucifixion or of people praying. Another example of this figure occurs in a cave at Sandahannah.

'Arak el-Ma consists of two great chambers, each over 400 feet long, and some smaller chambers which are, however, so large that the roof has to be supported by great pillars.

In two places within the cave there is a spring of water under the floor. The roof of the system has been quarried away or fallen in, as is the case with most of the Beit Jibrin caves.

These caves are mostly rudely cut bell-shape chambers with roof entrance. Some resemble Christian chapels. Crosses and Kufic inscriptions are carved on low levels, the chief of which contains the name "Salah ed Din"—perhaps Saladin. There are columbaria also.

Sandahannah: cf. G.C. 16, III (I, 102).—One cave at Sandahannah (*E.P.*, p. 239, No. 25) has a columbarium with square loculi in quincunx arrangement, and some triangular loculi also. Another room has a stair with a double parapet.

The next cave (No. 26, *ibid.*) has a corridor separated from a room by a rock partition with a door and four windows in it. On the wall of this corridor so many tether holes are cut, that it must have been used as a stable.

Another (27) contains an olive-press, and at the entrance of one (No. 29), on the right jamb of the central entrance, a rude figure is cut (*E.P.*, p. 242, Fig. 90).

Es Suk Columbarium (No. 31): cf. *Gezer Tomb* 140 (Fig. 183, Vol. I).—Perhaps the most interesting rock-cutting at Sandahannah is the fine columbarium, called by the natives Es Suk, the Bazaar, doubtless because of its plan. It consists of one tunnel, 94 feet long, crossed at regular intervals by two transepts. The roof over the whole is flat. The side walls are in three sections, one above the other, and each receding behind the one below

it. The lowest section is a plain plinth about 8 to 10 feet high. The section above it recedes about 15 inches from the plinth, and is nearly 10 feet high. The uppermost recedes 12 inches from the one below it, and is over 7 feet high. The complete height is thus 25 to 27 feet. The two upper sections are divided

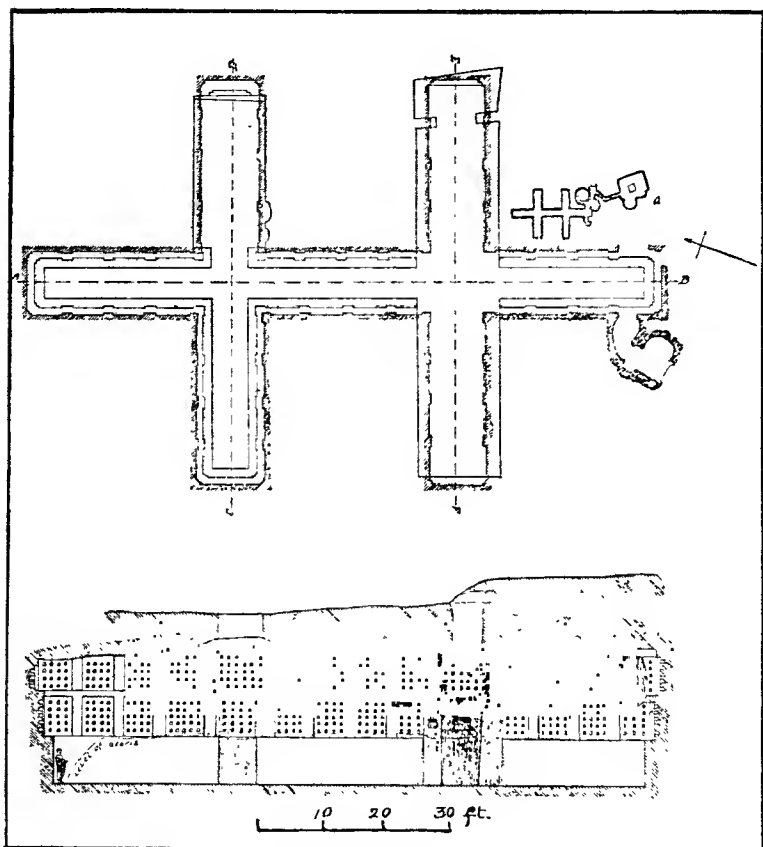


FIG. 8.—TELL-SANDAHANNAH PLAN AND SECTION.

into sunk panels by pilasters, each panel containing rows of loculi for cinerary urns.

The loculi are semicircular at the top.

There is only one inscription. It is in Greek, and reads, "Simê seems beautiful to me, L. (or D.) Nikateides." The

writer, whose name is L. or D. Nikateides, was obviously a Greek, and had probably deposited the remains of Simê, perhaps his wife, near to the inscription. The main gallery has 991 loculi, the north transept 580, and the south transept 335. Total, 1,926.

There is another interesting columbarium (No. 33, *idem*), which it is impossible for us to include here.

The main interest of the Mugharet Sandahannah (*H.G.*, p. 263) lies in the arched roof of one tunnel *built* of limestone blocks, and the Hebrew letters פ, נ or י found on one wall.

The caves at *Atraba* are bell-shape roof-entrance caves, and need not be described.

Of those at *Beit Leyi* only one is of interest. It seems to have been a rock-cut Christian chapel (*E.P.*, p. 253). It is now a sheep-pen. A figure, now indistinguishable, has been destroyed by Mohammedans.

DATE OF SHEPHELAH CAVES

The Beit Jibrin caves have been much discussed. They have been assigned to a late, probably mediæval, date for the following main reasons. The other caves in the surrounding district are subject to the same considerations.

1. Jewish tombs have been destroyed in making some of them.

2. There is said to be a Kufic inscription speaking of the making of the caves.

3. There are various Kufic and Christian inscriptions on the walls.

4. The sculpture in the Cave 'Arak el-Kheil is regarded as mediæval.

5. The diagonal dressing of the walls is regarded as the work of Crusaders.

The Crusaders undoubtedly used these caves and adapted them to their own purposes. As they now stand, the caves are mediæval, but this does not prove that they did not exist at an earlier date.

1. With regard to the first, Macalister admits three instances where Jewish tombs have been cut into by the cave-makers, but this merely proves that caves continued to be made to a late date.

2. The Kufic inscription spoken of has never been seen nor published.

3. These Kufic and Christian inscriptions on the walls are no indication of the date when the caves were made, but show merely that the caves were still used in late periods.

4. The sculpture at 'Arak el-Kheil is not in high relief, but in cavo-relief. The background is merely cut away, so that the sculpture is really flush with the surface of the wall. It is thus not necessarily so late as mediæval times because of its style.

The Crusaders undoubtedly used and adapted this cave, and they probably added the friezes, but these prove no more than the inscriptions above prove.

5. The diagonal dressing on the walls of the caves is wide and done with a pick. That of the Crusaders is fine, close, and done with a comb, or tooth hammer. The direction of the dressing is accidentally the same.

The arch found in Sandahannah cave may be much older than the Seleucidan period, as recent discoveries have shown.

Other external indications of date are subject to the same criticism as above, but one Sandahannah cave is certainly prior to 600-500 B.C., as it was found concealed by debris of which the lowest stratum cannot be later than that date.

THE CAVE-DWELLER HIMSELF

We possess no pen or pencil sketch of the cave-dweller. The nearest approach to a portrait of him is preserved to us in two or three small handles, which have been broken off Amorite jugs of the Early Bronze Age. These seem to be modelled heads or caricatures of the cave-dweller. One was found in the lowest strata of Cave 3, III, at Gezer, so that the inference seems correct. It was an Amorite picture or caricature of the cave-dweller. Another was given to me by my friend Dr. Albright of Jerusalem.

The caves themselves supply very few details of their mode of life, furnishings and such like. They lived the simple life. They do not appear to have troubled even to make divans or seats, though in the large cave at Ophel there is an excellent natural divan at the innermost end just under the funnel. If they used beds, they must have been of perishable material.

Near the east entrance the flat ledge of rock on the north side had been used for the full-length burial of a chief, in a casing of mud-plaster.

That they enlarged the chambers of their caves there is no doubt. That they excavated new chambers for themselves is very probable, but that they connected various natural caves near each other by even long tunnels cut in the solid rock is beyond dispute. The meanderings of these tunnels, the mistakes in levels, the tunnel often reaching the next chamber several feet above, or some feet beneath, the floor-level, the variations in the size of the aperture of the tunnel itself at various parts—all these details point to work done by primitive men with very primitive tools indeed.

One of the greatest puzzles of these passages that led from room to room is the extraordinary narrowness at or about the centre of some of them. If the cave-dweller was able to pass through these, he must have been of exceeding small dimensions. At Gezer, a small boy was able to pass through one of these narrow gaps only, as he said, "by taking off his clothes."

It is clear that they began these tunnels usually from both ends and worked till they met. A suggested explanation of these narrow gaps in the centre of tunnels, and of the varied levels, is offered below (p. 49). In all these tunnelling only hammers, presumably of flint, were used, with occasionally flint or wooden chisels: but the limestone underground is of soft cheesy texture, so that tunnelling was an easy matter. It is only when it has been exposed for some time to the atmosphere that this limestone becomes hard.

The stair entrances to these caves are of course artificial, and must be the work of the cave-dweller. In fact, though these caves all have the appearance of being natural, it is very hard to say where the natural ends and the artificial begins.

That the cave-dweller was a man of small stature is perhaps suggested by the low roofs of these caves. The narrowness of the tunnels seems to point to the same fact, and the measurements from such bones as have been secured from authentic cave-dweller burials confirm it. These indicate that the average height for a man was 5 feet 6 inches, and a few inches less for the average woman.

Their weapons and their implements were of stone, and are discussed under flints, but they used bone also. Frequently among the pottery flat pieces of bone with triangular points

are found. In my work on Ophel I found many of these, and a similar pointed tool made of baked clay. These are often described as styli for cuneiform writing, which may be quite true of a later period, but there is little doubt that the cave-dweller used them for net-making or for incisive decoration of pottery.

The dishes used were all hand-made and of the coarse type common to the Neolithic Age all over. These are described under Pottery.

In all probability the women made the pottery, just as we find today the women of the modern village of Ramallah near Jerusalem making such excellent imitations of the earliest decorated Canaanite water-jars, that it is hard to distinguish them from the originals.

The cave-dwelling man seems to have been both farmer and hunter to some extent, as the drawings in Cave 30, IV, at Gezer suggest: but above all he was a house-maker, which means he was a maker of caves and tunnels.

There are indications that some of his cuttings may have been intended for securing a water-supply by collecting rain. Some of the cave chambers appear to have been cisterns from the outset, though we are not certain that these were his work. There is, however, one outstanding piece of work attributed to the cave-dweller, which proves beyond doubt that he tunnelled for water and excavated even to a great depth in search of springs. This is the famous water tunnel at Gezer.

CAVE-DWELLERS' CUTTINGS

TUNNELS: THE WATER PASSAGE AT GEZER

The earliest example of tunnelling attributed to the cave-dweller is the water-passage at Gezer. It is really a gigantic staircase 219 feet long, cut in the rock. The entrance is about 35 feet long on one side. The roof is barrel-shaped, and follows the slope of the steps. At the entrance this tunnel is 23 feet high and about 13 feet wide, but it diminishes greatly towards the end, and apparently the hardness of the rock forced them to continue the slope of the roof beyond the bottom of the staircase, so that at one point it is difficult to squeeze through.

The staircase ends at a powerful spring with a pool of great depth, 94½ feet beneath the rock surface and 130 feet beneath

the present surface level. The tunnel proceeds further and ends in a natural cave 80 feet by 28 feet. This cave was found full of earth and was not cleared.

The debris closing the entrance to the tunnel contained objects of the III Bronze Age, dating about 1400.

The water passage would seem, therefore, to have gone out of use at about 1450. Tool-marks¹ on the roof show that flint tools were used. Macalister thinks, from the flint tools used, that this tunnel was the work of Neolithic cave-dwellers. It must, therefore, date prior to 2500. The use of flint tools is not conclusive. Stone implements continued to be used long after metal was discovered, as, *e.g.*, in Egypt in the case of some tombs at Luxor (Handcock, p. 56). The tunnel may quite well be the work of the immigrant Amorites.

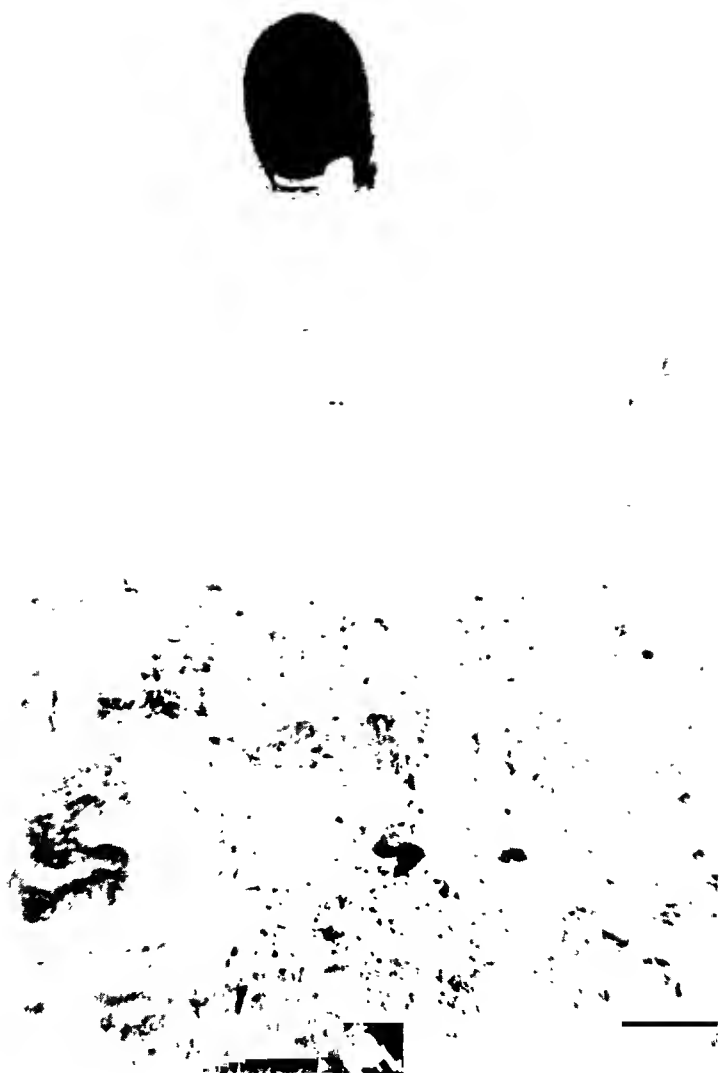
There is no doubt, however, that the cave-dwellers were great excavators, and when we recall some of their tunnelling operations, in extending their caves and connecting the various chambers, there seems nothing impossible in their having cut this great staircase. The only difficulties seem to be, how they could have gone to such a depth for water with no prescience of its existence, and, if the tunnel was begun as a means of refuge or escape, why should they have burrowed so deep?

The tunnel was found filled up with earth and stones. As its entrance is in the middle of the court of the earliest Amorite governor's palace (2500-1800 B.C.), it was probably still in use when this building was erected, and formed the main water-supply of the palace fortress. "Mycenæan" sherds found in the filling may point to its being filled up between 1800 and 1500.

Evidently the stairs became so worn as to be unsafe, and hand-grip hollows were cut in the sides. There are many niches, varying in size from mere pigeon-holes (perhaps for lamps) to large cupboard recesses.

Nothing was found in the tunnel that would help in fixing the original date, but the fact that the Amorite palace of 2500 B.C. is built over it is fairly definite proof that it preceded the palace or was cut by the early Amorites. It seems most likely that the site for the palace-fortress was selected to secure this tunnel and spring.

¹ For tool-marks *cf.* G. Cave 16, III, where flint chisels with gaps on their edges were used (G. I, 102).



THE WATER-PASSAGE AT GEZER (LOOKING UP THE SLOPE).

facing p. 35.



POTTERY OF CAVE-DWELLER AND EARLY BRONZE AGE

THE WATER TUNNEL AT ES SALT¹

There is a similar staircase tunnel which runs down the rock from the top of the hill now known as the Castle of Es Salt in Transjordan, to the powerful spring in the bottom of the valley. This spring is now open and surrounded by the modern village. It may at one time have been underground. Here, the object of the tunnel is to give the inhabitants of the fort a safe means of securing a known water-supply, as there is practically no water on the top of the hill.

A little over 100 years ago there was a powerful fort on the hill, and Ibrahim Pasha determined to blow it up. He cut a side tunnel into this staircase, and deposited dynamite, but the explosion succeeded only in blocking up the old staircase. I passed up the Pasha's tunnel and entered the staircase. The upper exit, however, is now covered by the floor of a modern house on the top of the hill, and the air was so foul that we had to crawl back with all speed. That this passage at Es Salt is of great antiquity cannot be doubted, but it is obviously a warlike precaution belonging to later Canaanite times.

QUARRYING AND CISTERNS : CAVE-DWELLER

As the cave-dweller did not build his dwelling, quarrying of building material was not a necessity to him. What building he did was confined to shoring up tunnels and supplying deficiencies in the rock. It was rude dry stone work, and he would naturally use the stones which he knocked off with his hammer in making his tunnels and chambers. There was no quarrying in the proper sense at this period, and to suggest that many of his caves were really quarries is ridiculous, seeing he had no object in merely quarrying, though many caves may be quarries of later periods, like "Solomon's quarries" at Jerusalem.

CISTERNS.

There is no definite evidence that the cave-dweller used rain-collecting cisterns. Many of his dwellings have later been converted into cisterns by cutting a shaft in the roof. Many of them, in fact, may have been made and used as cisterns

¹ Fully described in *P.E.F. Quarterly Statement*, January, 1928, p. 28. See also Shephelah Caves, p. 69.

by the cave-man himself. We know nothing to the contrary. The cistern near entrance "A" of Gezer Cave 28, II, is tooled with flint tools, and may be Neolithic. There is nothing impossible in supposing that he made chambers in the rock with a roof-hole and a channel leading to it to collect rain water. Even the most primitive mind could not fail to grasp this possibility, not to say necessity, in Palestine; but he may have found natural rain-filled cavities and springs enough for his needs.

If cave-man could make the water tunnel of Gezer to reach a sure supply, it is absurd to suppose he would never have made cisterns. Cistern caves, however, have been so often reused that, if evidence ever existed, in the shape of broken cave-dweller pots, it has now disappeared. The soft-baked cave-dweller ware could not long withstand water. The vats in Cave 30, IV, at Gezer seem to have been some sort of rain-collecting arrangement.

CAVE-DWELLER POTTERY

It will have been noted that most of the details described have been dated partly by the strata and partly by the pottery found.

The caves and most of the rock-cuttings belong to the period when there were no cities and men dwelt in the rock itself. Only when fragments of pottery known to belong to a later age appeared did any difficulty arise as to whether these works were made and used by the cave-dwellers or later.

In that case, a decision could be come to only by finding relics of the cave-dweller himself left in the cave or cutting. It is with the pottery that the ultimate decision rests. It is true that, owing to the many successive occupations of a site, the cave-dweller has been almost trampled out of sight, yet a few complete vessels and many thousands of fragments have been found. Even on Ophel, where the site had been occupied by successive civilisations from the cave-dweller's time down to the present day, his traces were not by any means obliterated. In the caves, complete vessels, pots, jugs and many fragments were found. In the deepest crevices of the rock surface of Ophel underneath all the debris of 5,000-6,000 years or more, complete vessels also turned up, as well as many fragments.

It was, however, in the debris thrown over the eastern wall of ancient Jerusalem by late occupants, who were digging for foundations or cisterns inside the city boundaries, that I found by far the best as well as the most numerous proofs of the cave-dwellers' occupation of the site of David's city, in the shape of hundreds of fragments of their pottery. Although there were so many caves at Gezer, only a few complete vessels of the cave-dweller period were recovered. Successive occupations, and later adaptations of the caves to other purposes, destroyed their testimony, leaving fragments only. The same remarks apply to any cave-dweller site that has been continuously occupied, though very few of the sites excavated have in fact shown any trace of the cave-dweller.

The oldest materials found at Jericho may be assigned to the Early Bronze civilisation. They are not Troglodyte, though they may be as old as Troglodyte, and contemporaneous. The cave-dweller did not reside at Jericho.

Ta'anach and Megiddo yielded very little that could be assigned to this period. Tell el-Hesi, Ain Shemsh, Tell el-Ful (Gibeah), Gerar and Beisan (so far) do not date further back than 2000, and the Tells excavated by Bliss and Macalister in the Shephelah yielded little or nothing that could be set down as Neolithic.

Our knowledge of the Neolithic or Cave-dweller Period, therefore, is confined to results obtained from examining the caves which they occupied, and traces of their existence found, on the rock surface at Gezer and Ophel.

CHARACTERISTICS OF CAVE-DWELLER WARE

No pottery is more easily recognised than that of the Neolithic cave-dweller in Palestine. It is not unlike that of the Neolithic period in our own country, though dating much further back. In fact, the crude beginnings of every race are very closely alike; at every period races used the same materials and lived under the same conditions. The differences are often merely local. Our earliest potters could not use exactly the same sort of rough clay, nor could they employ the sun to the same extent for baking.

The earliest Neolithic ware in Palestine has been well described as "porridge" ware. It is very like porridge made of very roughly ground meal. The clay is not cleansed. It is

full of chips of flint, quartz and hard limestone, and these chips are so large that they show on the surface even in a photograph and are especially visible in the section. The vessels are hand-made and hand-modelled, built up bit by bit from base to top, and frequently show the thumb and finger-prints of the potter. The surface, therefore, has not the precise evenness of a wheel-made vessel. Many were baked only in the sun. These go to pieces if wet. When fired, they are unevenly baked, producing different colours on the surface, and they are never perfectly fired through and through. The core shows a different colour from the surface.

Two kinds of clay were used, probably from different sources. One is a coarse reddish yellow clay full of chips of flint, which are frequently $\frac{1}{8}$ inch in diameter. As stated above,¹ I found a large hole in the cave on Ophel full of this clay, which had been the potter's store and workshop. This clay is found used as a mortar for binding the bricks together in the oldest wall of Jericho. The surface colour of the completed vessel is generally drab or dark grey, which is often burned to red.

Another clay used is similar, but contains chips of quartz. In the fragments found on Ophel, I have frequently found both clays mixed in the same vessel. Macalister found a third clay used at Gezer, containing only "limestone gravel." Ware made of this clay is very porous and rotten. In each case, the adhesive character of the clay is due to the presence of lime, as seen today in the mud of the streets of Jerusalem.

I found no Neolithic ware on Ophel made of this clay containing only limestone chips. But in the Hebrew period, from 1000 downwards, limestone chips were constantly mixed with the clay. These appear as white spots on the surface. If the vessels were subjected to the action of water, they disappeared and left an ugly pock-marked surface.

The first two clays were probably found at a distance and so were more expensive. As a substitute the potter may have used local clay and mixed it with broken chips of limestone himself. In the Bronze Age they broke up quartz into chips and even fine powder, to mix with their clay, and so made it very hard with a fine surface. The Hebrews found limestone handier, and more easily broken. In the Maccabean period sea-shells were ground and mixed with the clay.

Baking.—In Neolithic ware the surface is usually a drab or

¹ Ophel large cave.

dark-grey colour, often burned red. The section always shows a lighter colour than the surface except, of course, in sun-baked pottery. This shows that they had not mastered the art of even distribution of heat in firing. They did not use close ovens, but built fires round the vessel inside and out. Sunbaked ware is of a dark-grey colour, and easily distinguished by its being so friable.

Types of Vessels.—Some of the vessels used were large neckless hole-mouth jars, of globular shape with no handles. In these the mouth was a convenient size to allow the egress of a hand full of meal or grain. They had been the mistress's store jars. They varied in size from $22\frac{1}{2}$ to 10 inches in height. Bowls, cups, basins, saucers, jugs, juglets, and platters of various sizes are of frequent occurrence. Large amphoræ, or water-jars, with two loop-handles, corresponding in size to those of the later periods, were in use, but few specimens have been found.

We have found, however, many miniature copies of these varying in size from 11 to 5 inches high. One large loop-handle of such a water jar was found in Cave 30, II, at Gezer, an undisturbed cave-dwelling, and squat cooking-pots with vertical sides and loop-handles made of heavy slabs of coarse ware were found on Ophel. The two outstanding types are the ledge-handle and the cord-eye handle amphoræ.

Large jars occur, with plain ledge or wavy ledge handles below the widest diameter of the sides. These vary in height from 16 to 18 and 19 inches. Miniature copies of 10 to $3\frac{1}{2}$ inches in height also occur. Some of them have in addition loop-handles at the neck which were added for holding and pouring liquid of some sort. One large example had two transverse loop-handles on the shoulder as well as two wavy ledge-handles on the side.

The other very important class of cave-dweller ware is the cord-eye handle bottle-shaped amphora. These are all small in size. Sometimes this handle is a mere hole bored horizontally through the thickness of the shoulder of the vessel large enough to admit a cord. Sometimes lumps of clay have been added to the shoulder and the holes pierced in them, and occasionally by the enlarging of the hole this cord-eye handle appears like a tiny loop-handle.

In some specimens the added lumps of clay are moulded into cylinders about 2 inches long. These are usually placed

vertically on the vessel, in *one case horizontally*, and the small holes are pierced through them. As a rule, the vertical cylinders are in pairs, for the obvious reason that a double string handle could be inserted much more satisfactorily. When placed horizontally a single cylinder sufficed.

These are obviously jars intended to be carried or suspended by strings of gut or basket withes. It is difficult to say what they were specially used for; they are too small for water jars. Some of them are decorated with red drip-lines, and some with a basket-work pattern in reddish brown. These are probably imitations of an earlier form which had been enclosed in a basket-work of withes or reeds. They may be the early form of "dippers" used for extracting water or wine from a large jar.

Cups.—Some of the cups resemble modern tea-cups very closely in size and shape. Usually they are wide and shallow. The handle is a tiny loop and sometimes a cord-eye. The ware is very coarse, thick, and roughly finished.

The same may be said of their loop-handle jugs. They are not large, and appear to have been used simply in housework for taking water, wine or oil out of a vat or larger jar. Some have a rough, clumsy cylindrical spout and were probably used for drinking.

No great variety of bowls, basins, or platters has been found. One fine bowl has two plain ledge-handles and a clumsy cylindrical spout (broken off). It was found in a cave (15, I) at Gezer, and is of yellowish brown porridge ware with a lime-cream wash on the surface and roughly parallel groups of vertical red drip-lines down the sides. The deeper neckless bowls seem to have been used as cooking-pots. Of these I found many rim fragments on Ophel, blackened with smoke.

Some bowls have flat bases and sides almost vertical. Bowls or cooking-pots of this description with loop-handles were found in fragments on Ophel. They are of very heavy slabs of rough clay. Others have rounded bases, and one from the "Crematorium" cave at Gezer (C. 2, I) is ogee-shaped, but this last belongs to the burial period of the cave's history and may date later.

About a dozen specimens, five of them small saucers and five fragments of large wide deep bowls, were found in a cave (27, I) at Gezer, the mouth of which was closed up by the foundations of the earliest city wall at a date not later than 2500 B.C.

These larger basins have rope-pattern mouldings round the rim, and four of the others are decorated with oblique parallel notches, two in single and two in double rows.

Flat trays for baking, probably, and oven bases with similar notch indentations were also found in Gezer and Ophel, and on Ophel I found many fragments of bases indented with the pattern of a reed mat, showing that the jars had been set on a mat in the sun to dry before being baked, a custom which is still practised by modern potters in Jerusalem, a rare example of a custom surviving for some 5,000-7,000 years (see *J.S.T.* [Vincent], Pl. 7, Figs. 1 and 3).

DECORATION

The methods of decoration used by the cave-dweller were few and simple. They consist of moulding, incision and painting. Some think he used burnishing and combing as well. Combing consists in scoring the wet body of the vessel with a wooden comb of many close-set shallow teeth, that leave rows of fine closely parallel lines. The number of teeth on the comb used can be counted at points where the potter rested his hand or changed direction. I have never seen any combed ware that could be called cave-dweller ware. The rough chips of stone in it and the uneven hand-modelled surface would make combing impossible. Nor do I think they burnished the surface of vessels, though it is hard to believe that they used vessels so porous and with the surface as rough as we find them.

Both combing and burnishing were, however, in practice early enough for the cave-dweller of 3000-2500 to use them, but they belong to the immigrant Amorite civilisation. The example (G., Pl. 28, Fig. 17) which Macalister says is wheel-made must belong to the civilisation which we call Early Bronze, not to the cave-dweller. Undisturbed Troglydyte cave-dwellings contained no examples of burnishing.

Punch-hole Patterns.—The simplest decoration is a series of punch-holes or punch-marks round the rim or neck of a bowl, made by a round pointed stick not more than $\frac{1}{2}$ inch in diameter. Originally they pierced two holes on each side of these bowls, which were used as cooking-pots, and passed a gut-string through to suspend them over the fire. When this practice ceased, they continued it as a sort of decoration, but did not

drive the holes right through. Groups of these indentations are found on the sides, often three in triangular form, and often a line of them down the handles. Some may be merely potters' marks. Occasionally obliquely incised notches are placed to form a herring-bone pattern round the neck or body of a vessel. Sometimes they occur in single rows and sometimes in double rows running in the same direction. These wedge-shape slots are made by a pointed flint, piece of wood or bone.

Rope Mould.—The rope-pattern moulding is the most characteristic decoration of the cave-dweller ware. It is doubtless a reminiscence of the use of a rope of twisted withes run round water vessels for carrying or for strengthening them. A band of clay is run round the body, on the shoulder or neck, and the rope pattern is sometimes carefully modelled with a pointed instrument. Often it consists simply of a succession of thumb or finger indentations round the band.

Knobs.—Rows of knobs like the nipples of the breast are frequently moulded below the rim of a bowl (see *Gezzer*, Pl. 48, Cave 7, II): or arranged in patterns on the body of the bowl (*G. I.*, 149, Fig. 50, C. 21). This knob pattern persists right down through, or reappears in Hebrew times.

Red Drip-Lines.—In painting, the commonest design is the simple red drip-line pattern. The potter seems to have laid his brush or reed full of paint on the body and allowed the paint to run in lines at its own discretion. They frequently interlace and are never parallel. The lines are broad and heavy at the top, thin and pointed at the bottom.

Parallel Lines.—Brown parallel lines or stripes, perpendicular or oblique or both together, in separate panels, with occasional wavy-line panels are common designs. The basket pattern is, however, the commonest of all painted designs. Animal figures and landscapes they did not attempt to draw or paint. At least no examples are found. This in itself shows how primitive the cave-dweller was, and the graffiti on the walls of Cave 30, II, confirm it, for at 6000 B.C. in Egypt, at Nagada, we find pottery exactly resembling the Early Bronze ware of Palestine on which animal figures and landscapes are rudely and quaintly painted, but with considerable skill and very pleasing effect.

In moulding, however, they occasionally attempted to reproduce animal figures. A ram's head with long curled

horns on the side of a bowl was found at Jericho, and another fragment with a bull's head. The donkey with panniers or jars on its sides on *Gezer*, Pl. 19, 3 (C. 11, II) may also belong to this period. These, however, belong, I think, to the early Amorite civilisation.

CAVES AND THE OLD TESTAMENT

In the Old Testament the existence of caves and dens in the mountains is everywhere presupposed as a fact which calls for no special remark or explanation, but nowhere is there any mention of the cave-men who at one time used them as dwellings. The O.T. introduces us to nothing earlier than a period when the sons of Anak, the Amorites, occupied the land and dwelt in fenced cities. The historical knowledge or memory of the writers of the original documents of the O.T., therefore, seems to have been limited to that period of Amorite occupation, dating, I think, after 2000 B.C. If the cave-dwellers continued to occupy their caves till after 2000, it is curious that no reference should be made to their existence in such a chapter, for instance, as Genesis xiv. Again, Lot's reluctance to escape to the mountain and his dwelling in a cave recorded in Genesis xix seem to imply that the caves were then vacant, and cave-life was a life of loneliness and isolation. Yet there is no doubt whatever that pottery of the cave-dweller type continued to be made in this period, 2000-1600, and Neolithic flint tools and weapons of the earliest types are found near Tell-Fara at a much later period. It is possible, therefore, and very probable that the cave-dweller had become a dweller in cities by that time. The caves, however, continued to play a part in the life of the people throughout this and the succeeding periods. In the period of the Hebrew conquest, 1200-1000, when they were sorely pressed by the Midianites, the Israelites made themselves strongholds of the caves and dens of the mountains and retired to them (Judg. vi. 2). It is very probable also, that before they succeeded in capturing such strongholds as Gezer, Jerusalem, and the Amorite forts in the Plain of Esdraelon, the Israelites occupied the caves in the mountains, until they were able to clear spaces in the woods for settlements of their own, unless we suppose they dwelt only in tents.

The part which caves play in the later period of Hebrew

history is familiar to all. The Hebrews used them both as places of refuge and as tombs,¹ so that cave and tomb came to be almost synonymous (Matt. viii. 28 ; Mark v. 2 ; Luke viii. 27). They may well have been synonymous all along, for the cave-dweller seems to have buried his dead in the very cave that was his home, scooping a last resting-place for them in the rock itself. Frequently the tomb became the dwelling again, as we may see in the vicinity of Jerusalem even today, where Hebrew rock-tombs are used as dwellings by nomads and their flocks.

Where suitable, the Hebrews used them also as store chambers for stores or hidden treasure (Jer. xli. 8), and converted them into cisterns.² These in their turn, when empty or abandoned, were used as prisons. The dungeon of Malchiah (Jer. xxxviii. 6), Jeremiah's prison into which he was let down with cords, the pit into which Joseph was cast (Gen. xxvii. 24), were empty cisterns, which had probably been originally caves. In Psalm xl. 2, the Psalmist speaks of himself as having been in just such a cistern as Jeremiah's prison, which had several feet of mud deposit in the bottom of it, in which he sank so deep that he was unable to move. As his friends raised Jeremiah and set his feet on the rock surface of his dungeon, so Jehovah had delivered the Psalmist and "set his feet upon rock." Were Jeremiah's experience an isolated instance, we might say at once that Jeremiah xxxviii. 6 is the background of Psalm xl. 2, but it was probably a very common occurrence, when a man had to be put away safely and quietly. Jeremiah xiv. 3 says that the nobles sent "their lesser people"—*i.e.*, their inferiors—"to the waters"; they came and found empty cisterns. There may be here an allusion to this method of disposing of troublesome people. The last clause of Psalm xl. 2 is particularly vivid, and shows that the writer himself knew what it was to struggle for foothold in the sinking mud at the bottom of an empty cistern, and what relief it was to have his feet on rock, and "his going established."

¹ See Gen. xix. 30 ; xxiii. 19 ; xxxvii. 20 ; xlix. 29 ; Judg. vi. 2 ; Josh. x. 17 ; 1 Sam. xxii. 1 ; 1 Kings xviii. 4, 19 ; xix. 9 ; Isa. ii. 19 ; Jer. xli. 8. Cf. Heb. xi. 38.

² For cisterns in the O.T. see Jer. ii. 13 (broken) ; 2 Kings xviii. 31 ; Isa. xxxvi. 16 (same—Sennacherib). Cf. Prov. v. 15 ; Gen. xxxvii. 20 ; Eccles. xii. 6.

THEIR PURPOSE

The purposes for which the caves in the Shephelah were made must have some bearing on the date of them.

1. A great number, especially *bell-chambers without stairs* and *some with stair entrances*, undoubtedly served as *wells or cisterns*. The steps would allow their being cleared of silt from time to time, as these cisterns were surface-fed in the rainy season.

2. Many, perhaps most, of the staircase bell-chambers were *storehouses for grain or fodder*. The stair is easily explained in this case. The brick-built store chambers which I found at Sharanba in Egypt, named Burru Yusef (Pits of Joseph) by the natives, were of this bell shape and circular type, with a side-hole entrance in the roof leading from the artificial solid brick platform into which they were built.

These were about 15 feet deep, but they had no stair entrance.

3. Probably *none* of the bell-chambers were intended for *burial*, though many were later adapted to serve as columbaria. Other types, of course, were obviously built for no other purpose but to serve as columbaria, and the problem in regard to them lies in whether they are later than, or contemporaneous with, the bell-chambers generally associated with them.

Religious Purpose of Some—Oracles.—Macalister thinks some of them were great meeting-places of the congregation of the people for religious ceremonies. The Khurbet el-'Ain cave described above, seems specially adapted for such a purpose.

The *raised passage* which begins at an obscure and easily concealed recess and ends high up the wall of another large chamber, he thinks was intended for the carrying out "of some fraud or other," the impressive pronouncement of oracles or messages from Jehovah, perhaps, something like the miracle of the Holy Fire at Jerusalem at Easter. The noviciates could be assembled in the large room, and the priest appear in suitable garb at the hole in the wall, or his voice be heard from the tunnel and appear to speak to them "from above."

The two caves, connected by a tunnel, in the High Place¹ at Gezer Macalister thinks are admirably adapted for the giving of oracles or messages from the Deity. The passage is crooked and so narrow that one can scarcely twist through, and one

¹ Gezer II, p. 381 *seq.*; Caves 18, I, 19, III; Gezer I, 105-107.

cannot see through it, but any sound in either chamber can be heard in the other.

He thinks, therefore, that a confederate of the priest spoke the oracle of God from one chamber to the excited people in the other, his voice passing through the tunnel. Robertson Smith's suggestion that the Greek word μέγαρον (Megaron), as meaning "Place of Oracle," is really the Semitic word מערה (Ma'arah) (مغارة, Arabic), "a cave," is probably correct, the word being borrowed in connection with this practice.¹

Similarly in 1 Kings vi. 19 the "oracle" is said to be in the "Holy of Holies" the adyton, or unapproachable spot.

It is this oracle that is referred to probably in the two passages in Jeremiah xxxvii. 17, where Zedekiah asks Jeremiah "Is there any word from the Lord?" and Jeremiah xlix. 14, "I have heard a rumour from the Lord."

There is an instance of a *Raised Passage* in Cave 28, II, at Gezer where it enters Room 4 at a height of 9 feet above the floor. This room has a spiral staircase from above, and is over 20 feet in diameter. Room 3 is a mere hole, entered from 2 by a small hole in the wall, which could very easily be concealed. Here the conditions suit Macalister's theory remarkably well, especially when we remember that the floor of Room 1 is a horse-shoe pattern of cup-hollows, which are usually associated with early Canaanite religion. The northern part of C. 28, II, system at Gezer seems to have served a religious purpose. The whole system might have been the quarters of the priestly clan, but this belongs to a very early period.

It may be, therefore, that here in the Shephelah caves we have the survival of a very ancient Canaanite custom.

On the other hand, these passages may either have been secret means of escape from pursuit, or traps to beguile pursuers into, as suggested above.

If Macalister's theory is correct, it follows that this cave at Khurbet el-'Ain must be pre-Exilic in date, "and probably pre-Judaic." Macalister thus thinks the cave may date earlier than 600 B.C., and probably as early as 1200 B.C., if not earlier still. Cave 28, II, at Gezer would strengthen this position.

Cave No. 34 at Sandahannah (*E.P.*, p. 248) Macalister regards as another example, and it is significant that the Christian symbol is found, when we remember that the habit of early Christians was to Christianize places and feasts which

had already been associated with religious cults. Many crosses are carved on the walls of 34, yet it is obviously a pre-Christian cutting.

Another cave at Sandahannah (*E.P.*, p. 264) Macalister suggests was an underground temple.

SCRIPTURAL EVIDENCE

Cisterns have been cut in the rock and ancient caves have been adapted as cisterns to our knowledge from 2000 B.C. downwards, certainly from the thirteenth century, if Macalister is right in his dating at Gezer. Many of these chambers may therefore have been cisterns and yet belong to an early date. They may have been dwellings or stores of a very early period, and afterwards adapted as cisterns. Where plaster occurs, their use as cisterns is not to be set down as late on that account. There is little doubt that plaster was used from earliest times where rock was porous and leaky.¹ The evidence of Scripture confirms this. "Pits," or "wells," "dens" and "caves" are constantly assumed to have existed in the earliest periods referred to.

Though we cannot tell definitely at what period the habit of collecting water in rock-cut cisterns, fed by a hole in the roof (with perhaps one or two filter-catch pots beside the mouth or with none), began, yet we know that Palestine must have been a cistern-using country from very early times.

Genesis xxi. 25, 30 is instructive. There, in the vicinity of Gerar, Abraham digged a well, which Abimelech's shepherds stole by violence. I am quite sure this meant the excavating of a cistern in the soft rock for collecting rain-water from the surface. When Isaac visited Gerar (*Gen.* xxvi. 18, 20) he found Abraham's cisterns had been filled with earth by the Philistines, and he cleared them. In verse 19, however, he found a spring, and this is definitely stated, as being different from the other

¹ Where the walls are found plastered, the plaster is sometimes a safe guide to the date when the cisterns were last in use. Frequently it is mixed with ground sherds to harden it, and very often Roman ribbed ware was used as a key for the next cast of plaster. Plasters of the Roman, Byzantine, Arab and Crusading periods are quite easily recognised through this and other features. Crusading plaster was baked to a hard pottery surface by fires lit in the pits. Broken pottery found in the cisterns helps further to date the latest and sometimes earlier use of them. There is little doubt that even in the earliest times when they made cisterns they used plaster if the rock was porous and leaky. At the time of Hezekiah plaster was undoubtedly freely used on every form of building. See *Deut.* xxvii. 2.

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wells (*cf.* vv. 21, 22), which were really rain-collecting cisterns. Isaac could not have found springs at every point where he digged wells; and only at the one spot is it definitely stated that he did. Here, again, the importance of cisterns is shown by the conflict that arose over the right to possess them (vv. 20-21). Again at v. 32 it is implied that Isaac's shepherds found a spring at Beersheba. There is no trace of this well or spring at Beersheba today.

In Genesis xxxvii. 20 the pit into which Joseph was cast was an empty cistern, and the "great pit" into which Absalom's body was cast (2 Sam. xviii. 17) must have been a cave or an unused cistern.

The danger which these empty cisterns became for sheep and cattle, which might fall into the roof-hole entrance, is provided against and damages assessed in Exodus xxi. 34. There the man who digs the "pit" is held liable. Such an accident is the background of Christ's parable in Matthew xii. 11.

2 Kings xviii. 31 (*cf.* Isa. xxxvi. 16) is another significant passage, though spoken about the year 705 B.C. There Sennacherib's Rabshakeh offers each Hebrew his own cistern, knowing well the importance of good cisterns at Jerusalem, and implying also that the Hebrews were there dependent upon cisterns at that time.

Proverbs v. 15 shows a similar sentiment.

King Asa made cisterns in Mizpah against siege (see Jer. xli. 9), one of which Ishmael used to conceal the bodies of his victims.¹

King Uzziah (*c.* 800) digged wells—that is, made cisterns—(2 Chron. xxvi. 10) "both in the low country, and in the plains."

Ecclesiastes xii. 6 speaks of cisterns with a wheel for drawing the water, a much later invention.

Jeremiah ii. 13 compares the false religions of Israel to "broken cisterns," which they have "*hewn out for themselves*," forsaking the "living spring of water."

So far as scriptural or archæological evidence goes, there is nothing incompatible with these chambers having been cisterns, and yet belonging to a very early period.

As to their having been burial caves, the O.T. mentions only one cave, the cave of Machpelah, as having been used for burial.

¹ It is now claimed that the actual cistern, with eight others, has been discovered at Tell en Nasbeh, the supposed site of Mizpah.

Macalister regards its silence as confirming his idea that they were not originally for burial, perhaps rightly.

The O.T., however, speaks of "pits" being used as traps for wild beasts (Ezek. xix. 4), and Isaiah xlii. 22 speaks of the people "being snared in holes and hid in prison-houses." Here both are referring to roof-hole entrance caves or cisterns.

2 Samuel xxiii. 20 seems to refer to such an incident, where Benaiah slays "a lion *in the midst of a pit in time of snow.*" It is quite likely that many of these caves may have served as traps for wild beasts. Some may even have been built for the purpose, but the majority of them are far too elaborate for this object.

CAVES AS PLACES OF REFUGE

At all periods in the history of Palestine, caves have been used as places of refuge. Lot (Gen. xix. 30), the five kings at Makkedah (Josh. x. 16), David in Adullam (1 Sam. xxii. 1, etc.), the hundred prophets fleeing from Jezebel (1 Kings xviii. 4) are examples.

The Israelites hid from the Philistines "in caves, thickets, rocks, holes, and pits (cisterns)" (1 Sam. xiii. 6), and the Philistines showed their contempt (1 Sam. xiv. 11). Nor were they always natural caves they fled to. The children of Israel made for themselves "the dens which are in the mountains, and caves, and strong holds" because of their fear of Midian (Judg. vi. 2) shows clearly that where needed, they not only used natural caves, but made caves for refuge. Verse 4 of this passage shows that it is the south country which is spoken of. There were therefore caves in the southland or Shephelah which were never intended as cisterns, but as places of refuge or defence.

Hebrews xi. 38, "they wandered in deserts, and mountains, and caves, and dens of the earth," indicates that caves served as places of refuge for Christians in the early days of persecution; and here the reference may very well be to these caves in the southland plains, where Christian symbols are so often found.

Of *store-chambers*, or secret hiding-places for stores or treasure, Jeremiah xli. 8 is a good example.

"We have stores, hidden in the field, of wheat, barley, oil, and honey," the ten men said, and Ishmael spared their lives. These stores were undoubtedly concealed in some rock chamber or cave.

The evidence of the O.T., therefore, makes it quite possible for these rock cuttings in the Shephelah to belong to an early date, though it gives no definite information as to how early they may be.

Hitherto they have been regarded as belonging to Christian times, one argument being that some caves resemble a nave with an apse. This argument can only be the result of a partial examination, for many have several "apses," and some have apses all round, just as we find in some of the caves at Gezer, which are certainly dwellings of the aboriginal inhabitants.

The fine cutting of the walls may lead some to assign them to a late period, because other known early caves are so roughly cut in comparison; but when we realise that the chalky rock can be cut with a pocket-knife, we should rather have been surprised had the cuttings been roughly done.

I believe that these Shephelah caves have been made at various periods. Some are probably cave-dwellings, as Macalister suggests. When those whose special purpose is manifest have been set aside, there still remain many which cannot well have been anything else but dwellings of Troglodyte clans. In the case of Cave 28, II, of Gezer, we concluded that the system had been expanded as the clan increased. The obstructions, the narrow, almost impassable tunnels led to this conclusion.

The same thing is found in many of these Shephelah caves, —e.g., some of the many-chambered caves at Sandahannah. They include rooms for living, storage, and stabling, presses for wine or oil, and perhaps also a means of disposal of the dead. There are the same pit-falls and useless ramifications of tunnels as we find in many of the Gezer caves, which distinctly point to casual and gradual enlargement.

From the fact that in some cases the columbaria caves could not be dissociated from the large bell-shape chambers beside them, Macalister concluded also that the cave-dwellers cremated their dead—a fact which he afterwards found confirmed at Gezer in the case of Cave 2, I, the "crematorium" cave.

The columbarium thus, instead of being a Roman invention, may prove to be a resuscitated practice of the oldest aboriginal inhabitants of Palestine.

In the "crematorium" (Cave 2, I) at Gezer, however, the burned bodies were left in position on the floor of the cave, layer upon layer of ashes, and were not collected to be placed

in jars upon loculi in columbaria. The only columbarium at Gezer is Tomb 140, which is of the same period as Es Suk at Tell-Sandahannah.

Near Saikh Ayub, I found a tomb somewhat similar in entrance to Gezer Tomb 140. A stair cut in the rock leads down to the tomb entrance. Above the entrance five small square loculi were cut, which could be reached from the steps of the stair.

These loculi were about 7 inches square, and seemed too small to contain cinerary urns of any size. They might have admitted a skull (see "Burial Customs").

II
THE EARLY, MIDDLE, AND LATE
BRONZE AGE

FROM PRIOR TO 2500—1200 B.C.

THE BRONZE AGE

THE EARLY BRONZE AGE PRIOR TO 2000 B.C.

WHEN we get down to the surface of the rock, we find the remains of a rude cave-dweller civilisation, but adjacent to these and to some extent mixed with them, we find the remains of another civilisation of a very high order, which existed alongside that of the cave-dweller for probably a large number of years, and ultimately supplanted it.

This higher civilisation we name the Early Bronze Age,

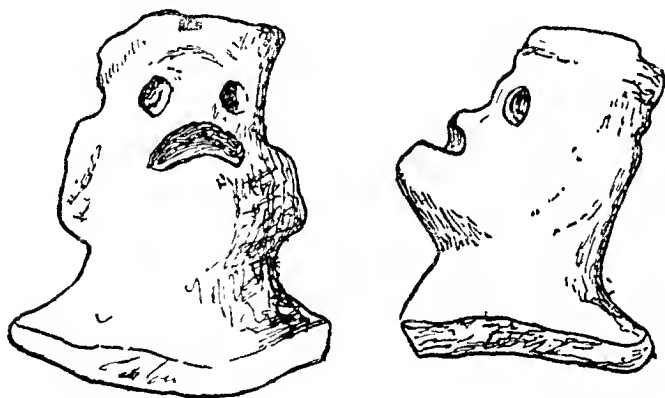


FIG. 9.—CARICATURES OF CAVE MEN (MAY BE II BRONZE AGE, 2000-1600 B.C.).

and assign to the period 2500-2000 B.C. But here again, though the later date limit is fixed for us, the earlier date limit (2500) is purely arbitrary, and we have reason to suppose that this higher civilisation dates as early as 4000 or 5000 at least, though it may not have definitely laid hold of Palestine till somewhere between 4000 and 2500.

There is no doubt that this was an immigrant civilisation, and the invaders were Amorites from the north-east. We have found their city walls on sites that are known to have

been fortified by the Amorites, and with the walls the pottery of this period, for instance at Lachish and Jerusalem.

At Gezer these remains were found alongside those of the cave-dwellers, and classed as pre-Semitic by Macalister, who apparently regarded the later civilisation as a higher development of the cave-dwellers'.

On Ophel I found abundant traces of their presence in the shape of pottery and sherds, and beautifully painted, complete vessels of the period were found by Captain Parker in the large cave where they had been deposited with burials.¹

These are Early Bronze ware, and the cave-dweller ware lay alongside. They prove that the Amorites occupied the rock surface, and did not dwell in the caves, but used them for burial.

EARLY BRONZE POTTERY : CHARACTERISTICS

The pottery assigned to this period in Palestine is mostly wheel-made.

The general surface finish, both outside and inside, presents a strong contrast to the cave-dweller ware. It is more even and more accurately modelled. This is in part doubtless due to more careful refining of the clay. The clay used is the same, but the large chips of flint are taken out and only smaller grit left. The potters seem also to have ground quartz or white flint² into a rough powder and mixed it with the clay to give consistency and hardness. The ware is fire-baked, but not evenly baked through and through. The core is black. The surface is drab, yellow, or reddish.

Some of the types of vessels are found also in cave-dweller ware, notably the ledge-handle jars and the small cord-eye suspension-handle jars, which were probably used as dippers for drawing water, wine, or oil from a large jar; the small jugs with loop-handles rising high above the rim; and the drip-line and basket-pattern on decorated vessels. The resemblance, however, is entirely confined to form. In composition, baking, finish, and decoration, the two are totally distinct. Instead of the one being the development of the other, it seems much more likely that the cave-dweller has borrowed these forms from the Amorite, and imitated them in his own ware.

¹ These are described in Vincent, *J.S.T.*, Pls. 9, 10, 11, etc.

² As quartz is not easily procurable in Palestine, it is more likely that white flint was used.

There are many types in the Early Bronze ware that do not occur in that of the cave-dweller, notably the finely combed and highly burnished vessels.

Apart altogether from form, however, the two are so completely distinct, that there is no possibility of confusing them, even where the forms are alike.

Types.—Briefly put, the following are the outstanding types of Early Bronze ware: large handleless jars with pulley-shaped necks; bowls with and without handles or spouts;

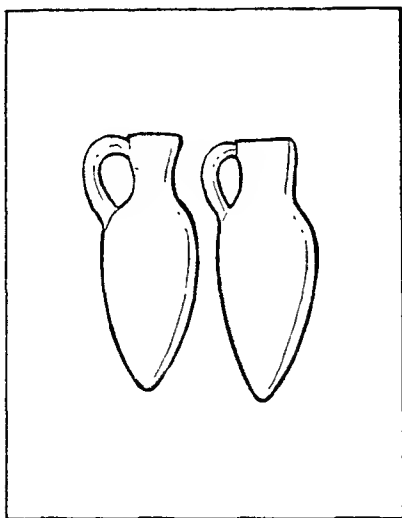


FIG. 10.—DIPPERS.

loop-handle jugs in great variety; basket-handle jugs; the fine cream-slip ware of Gezer; small loop-handle jugs with pointed base used as dippers; handleless jars with painted rim; bottle-shape jugs with or without handle; V-shaped bowls or saucers. Few, if any, of these types have been found so far in cave-dweller ware.

The great feature of Early Bronze ware, however, is its *combing* and *burnishing*. The combing is done on the soft clay with a comb of many very fine teeth, sometimes so neatly that it is impossible to distinguish the different strokes or count the number of teeth. The comb was most probably made of bone, as wood would be too soft.

The burnishing had been done by hand, with a hard, smooth pebble, and is so finely finished as to produce an unbroken glassy surface, and make it almost impossible to trace the lines. This burnishing takes the place of the glazing used in Egypt to prevent the vessel being porous. The same method and excellence of pebble-burnishing by hand is found on the foreign ware of Naqada in Upper Egypt.

Decorated Ware.—Here the Amorite far outstrips the cave-dweller. Early Bronze ware excels in incised ornament, the herring-bone pattern being conspicuous. In moulding, the rope pattern is found as in cave-dweller ware, but more refined. In painting, where the cave-dweller laid on his brush full of paint and allowed the drips to run down the side, a process which we describe as the drip-line pattern, the Early Bronze Age potter brushed on every line separately. Parallel bands, vertical and horizontal, with zigzag lines alternating, basket pattern, a survival of the vessel bound with withes, burnished surface on a red or brown painted background, irregular dabs or blotches of colour, dots between parallel bands, circles and triangles or saw-teeth are the chief designs, and mostly geometrical.

Landscapes, animal or human figures they did not attempt to draw, but they modelled rude animal figures and animal heads (*e.g.*, heads of bulls) occasionally on their ware, and caricature heads of the cave-dweller were used as jug-handles.

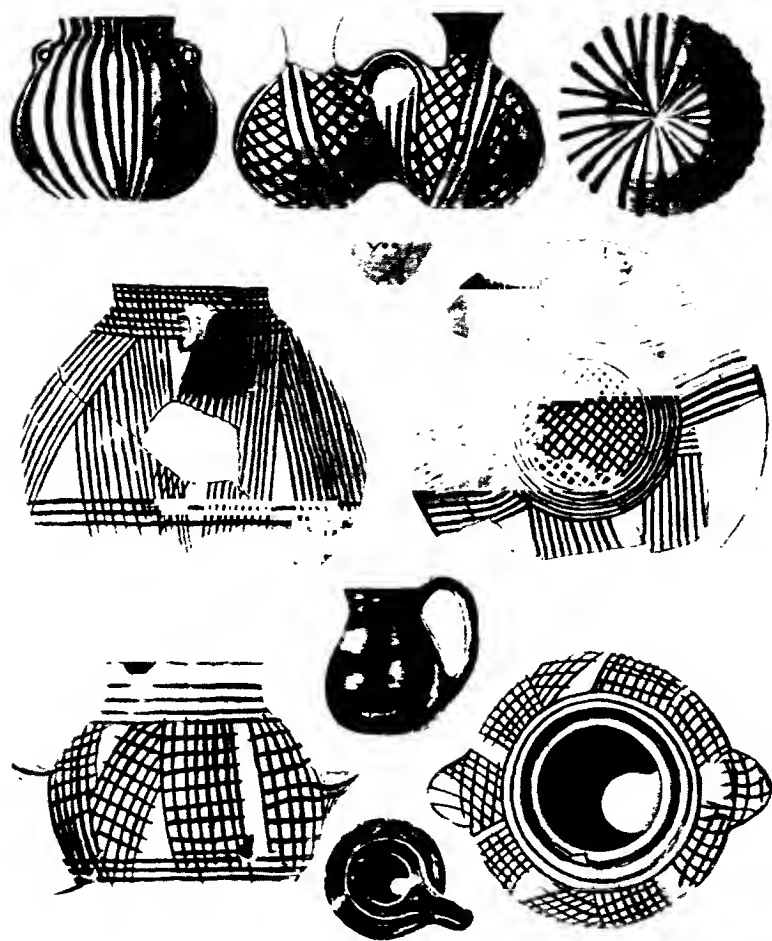
In this period potters' marks became both common and numerous. It has been pointed out that there is a striking resemblance between them and Egyptian potters' marks¹ dating about 5000.

Potters' marks found at Naqada² also closely resemble them, dating about the same period (5000). This forms another link between the Early Bronze civilisation of Palestine and that of Naqada, and is of great significance.

It is thus clear that there are very few points of contact between the cave-dweller ware and that of the Early Bronze age civilisation. The features of resemblance between the latter and the "foreign" ware of Naqada are far more numerous and striking. This resemblance is so close, indeed, as at once to suggest identity.

¹ Petrie's *Royal Tombs*, Dyn. I, Pls. 47-63.

² *N.B.*, Pls. 53-57.



EARLY BRONZE AGE DECORATED WARE (GROUPE A) CAVE ON OPHID.



1—HEADS OF HITTITES FROM ARMENIA
 2—HEADS OF AMORITES FROM SYRIA TAKEN TO THE NORTH OF AFRICA
 3—PHILISTINES (FROM THE NORTH OF AFRICA)

II. BRONZE AGE

facing page

EARLY BRONZE POTTERY AND NAQADA WARE

We shall now gather up all the points of contact between this early civilisation of Palestine and that found in Egypt at Naqada.

By far the most important types of Early Bronze ware are the two classes mentioned above—the ledge-handle and the cord-eye-handle jars. There is no doubt as to the antiquity of these two types. We found types in large numbers at Naqada,¹ Upper Egypt in 1894-5. They are found nowhere else in the East. They are certainly not Egyptian forms. They are unknown in Greece or Cyprus.

The Naqada ware dates as early as 7000 B.C.

The ledge-handle is found in Palestine on jars of all sizes, from 2 inches to 19 inches or more in height. The handle varies in length from $\frac{1}{2}$ inch to 10 inches.

The Naqada ledge-handle ware is identical with that of Palestine in form, paste, and shape of handle.² It is also hand-modelled. On the strength of this resemblance Petrie suggested that this Naqada ware and type of handle were brought to Egypt from Palestine in a very early invasion or immigration of Amorites from Palestine. He suggested also that comb-facing, which is so characteristic of the Early Bronze Age civilisation in Palestine, was brought to Egypt by the same immigration.

About 2000 B.C. ledge-handles begin to disappear in Palestine, though decadent reminiscences of them continue to occur down to 1200 B.C., when the Amorite civilisation was replaced by the Israelite.

Where these ledge-handles are found with copper and flint only, they must be dated as early as the Naqada ware, 7000-6000. Where they occur with bronze, they must be regarded as examples of a later resuscitation or continuation of type, dating after 6000.

The same may be said of the cord-eye-handle ware. These cord-eye-handles occur on stone vases³ and on decorated pottery⁴ at Naqada, where even twin-jars are found with them; but the jar at Naqada is a hole-mouth neckless vessel, not the bottle-shaped one of Palestine. In Naqada ware the handle is a horizontal cylinder on the side, pierced for a string, not a mere

¹ See *Naqada and Ballas* (Petrie and Quibell), Pls. 31 and 32.

² Cf. *Diospolis Parva* (Petrie), Pl. 2, etc.

³ See *Naqada and Ballas*, Pls. 8, 9, 35, etc.

⁴ *Ibid.*, Pls. 33-35.

knob on the shoulder, and the types referred to belong to the earlier Naqada ware, dating from about 6000 B.C. Similar cylindrical handles, placed vertically, two on each side of the vessel, and (I think) at least one example of a single horizontal cylinder on each side, occur in Early Bronze ware of Palestine.

The ledge-handle and the cord-eye-handle ware of the Early Bronze Age in Palestine is the same as that of Naqada. The cave-dweller ware is totally distinct in composition.

The pointed base "dipper" jugslets so characteristic of the Early Bronze civilisation are found in great numbers in Naqada ware, the only difference being that at Naqada they have no handle, and in Palestine they have each one loop-handle. Naqada ware is conspicuous in having practically no jars with handles, except those with ledge and cord-eye handles. Only two instances of loop-handles at Naqada were recorded.

The "hole-mouth" neckless jars, the bottle-shape jugs with handles and with no handles, the V-shaped bowls, which make their first appearance in Palestine in the Early Bronze Age, and numbers of other types of bowls, are common to both Naqada ware and the ware of the Early Bronze Age in Palestine.

In decoration also there are many features in common. The burnishing and the method employed are the same. The herring-bone incised design and others are common to both. The drip-line decoration, improved in the Early Bronze ware by a little guidance of the reed or brush, occurs in both. The wavy line or zigzag pattern and the basket pattern are identical.

Most striking of all is the similarity of potters' marks. Most of the marks found on pottery of the Early Bronze Age and its continuation in the Middle Bronze period in Palestine are found on the ware of Naqada, as a comparison of *Gexer III*, Pl. 190, or *Excavations in Palestine*, Pl. 29, with Pls. 52-57 of *Naqada and Ballas* will show at once. The potter at Naqada, influenced by his surroundings, allowed himself more scope and offers a much greater variety of design, but we must remember that we possess only a very small quantity of Early Bronze ware from Palestine, nothing to compare with that of Naqada for quantity and variety.

CONCLUSIONS AND DATES

1. From the features of resemblance detailed above, it is quite clear that there is a very close connection between the

Early Bronze ware in Palestine and the "foreign" ware found at Naqada, for we must bear in mind that the Naqada ware is not Egyptian in any sense.

In short, the evidence points to the fact that the Early Bronze civilisation in Palestine is identical with the Naqada civilisation, and its representatives must have been the immigrants who settled at Naqada in Upper Egypt during the early dynasties, between 7000 and 4000 B.C., or the originators of both are the same people.

We shall not be far off the mark if we call it an Amorite civilisation. Petrie considers its occupation to have lasted at Naqada for over 2,000 years, or down to about 4000 B.C.

2. It is equally certain that the aboriginal civilisation in Palestine was a cave-dweller civilisation. In every respect it is totally distinct from the Early Bronze civilisation, the chief points of contact being the ledge and cord-eye handle types of pottery which are found in both. The resemblance, however, is confined entirely to form, and the cave-dweller probably imitated the Amorite forms.

Products of both civilisations are found side by side: the transition from the coarseness, clumsiness, and crudeness of cave-dweller ware to the fine, artistic, and highly finished ware of the Early Bronze civilisation appears too sudden to allow our describing the latter as the progressive development of the former. There is the fact that though some types are common, the cave-dweller persists in using his own rough material and methods, even when he adopts the forms of the Early Bronze ware.

The cave-dweller pottery resembling Early Bronze ware in form, enumerated above, has been found in caves, and on the rock surface, very frequently alongside of Early Bronze ware, and in circumstances which would assign it to a late period in the cave-dweller age. Instead, therefore, of the Early Bronze ware having copied from the cave-dweller and improved these forms, it would appear more likely that the cave-dweller has imitated in his own materials types from the Early Bronze civilisation. In other words, the cave-dweller began to make these types after the Amorite settled in the land (*c.* 4000 B.C.). These types we know also existed in much finer ware, which is dated by Petrie as early as 6000-4000, in Egypt.

We are, therefore, driven to the conclusion that the Early Bronze civilisation is an Amorite immigrant civilisation in

Palestine at an earlier period than is generally supposed; and that the Amorite and the cave-dweller dwelt side by side for a time.

3. The next question which faces us is the problem when did this Early Bronze Amorite civilisation settle in Palestine?

That it swept over the land of Palestine at an early period there seems little doubt. It is possible that the first wave of immigrants did not settle in Palestine but passed on to Egypt, and there built for themselves a town in the region round Luxor whose ruins are now known as Naqada.

According to Petrie, their occupation of this site ceased about 4000 B.C. Now we have historical evidence that "Syria and Palestine" were known as "the land of the Amorite" as far back as the time of Sargon of Akkad, 3800,¹ and the Amorite civilisation cannot have been in its infancy then.

It seems tolerably certain, therefore, that the Amorite and the cave-dweller aboriginal existed side by side in Palestine from at least 4000 down to 2000 B.C.

By 2000 or soon after, the cave-dweller ware has virtually disappeared. The cave-dweller has been merged in the greater city-building civilisation. He has abandoned his caves except for emergency purposes, and the Amorite has made tombs of them.

We have found no indication of the relations existing between the two, except several caricature heads of cave-men modelled in clay, hard-baked, and used as handles of jugs by the Amorite. These do not prepossess us in favour either of the intellect or the appearance of the cave-man.

THE MIDDLE BRONZE AGE : 2000—1600 B.C.

DATE LIMITS

The later date limit of 2000 for the Early Bronze period is fixed with practical certainty. In the next stratum we find pottery which we know from Egypt belongs to the Hyksos Dynasty. The Hyksos appeared in Egypt some two hundred years prior to 2000. Their pottery, therefore, fixes the date of their appearance in Palestine at about, or not much earlier than, 2000. If, as is generally agreed, the Hyksos passed into Egypt through Palestine, their presence in Palestine dates

¹ Sayce in *H.B.D.* "Sargon."

even earlier. The study of the pottery of Palestine indicates that the Hyksos exerted a very wide and deep influence, and that their presence was not a mere passing through the land, but a prolonged stay.

Not only do we find pottery which may be regarded as of purely Hyksos manufacture, but we find also abundance of local imitations. The pottery of this period is so totally distinct in form, composition, finish, and decoration from that of the previous period, and has in many respects so completely supplanted it, that we are justified in using the year 2000 as the later date limit of the Early Bronze Civilisation, and the early date limit of the next. The later date limit 1600 is fixed by the Egyptian domination of the XVIII Dynasty. This does not by any means imply that the earlier civilisation was entirely supplanted by a fresh invasion from another source. On the contrary, the permanence of certain peculiar types and methods of manufacture and finish point to the people remaining the same, and indicate that their tastes and methods had merely been modified by outside influences.

It is to this period, the II Bronze Age, that the narratives of Abraham and the Patriarchs of the Old Testament belong. Though the narratives as we have them are of later date, they must embody earlier records or oral traditions.

THE AMORITES AND THE HITTITES AMALGAMATED

The period between 2000 and 1600 is very much better represented in recent excavations than either of the two civilisations preceding it.

Tell el Hesi, 'Ain Shemsh, Megiddo, Ta'anach, Gezer, the Shephelah Tells, Gerar and Beth Pelet (Tell Fara), have yielded a great amount of material that can be definitely assigned to this period and gives us some idea of the civilisation represented. Ophel and Jericho, while not altogether barren, have added little to our knowledge of these 400 years, and at Bethshan the excavators have not yet reached a lower depth than the stratum representing the fifteenth to sixteenth century B.C. This period corresponds with the XV-XVI Dynasties of Egypt, and the indications of contact between the two countries are confined entirely to the Hyksos.

The most striking feature of the period is that now we step into a civilisation which, while it contains positive evidence

that it is a continuation of the high Amorite civilisation of the Early Bronze Age, yet exhibits many features that are entirely new. The Amorite has by no means disappeared, but his types of pottery, for instance, and the outstanding features of his work in pottery manufacture, are relegated to the background and supplanted by new methods and types, which indicate an entirely foreign influence, as well as a slavish imitation of that foreign influence. The originality and unique character of the Early Bronze Age practically vanish, as well as the equally unique, though crude, work of the aboriginal cave-dweller.

There is one outstanding foreign influence that has stepped in, and it is by its presence that we are able to fix the date limits of the period so precisely.

This is the Hyksos element, traceable in several types of pottery which we know from Egypt are characteristically Hyksos.

None of these types is found in Naqada ware, but they are quite a feature of the Hyksos pottery found at Tell el Yahudiyeh, which had been the Hyksos fort Avaris, in North Egypt. The Hyksos controlled Northern Egypt from c. 2200-1600, and as their later kings are Semites and generally supposed to have passed from Canaan to Egypt, they must have exerted their influence on Canaan even prior to 2000.

The recent discovery of Hyksos graves with their contents at Bethpelet leaves no doubt that the Hyksos were in Palestine by 2375. The scarabs in these graves indicate also that Dynasties XV-XVI of Egypt were Hyksos and were contemporary with Dynasties XIII and XVII of Southern Egypt.

This accords with my conclusions from Gezer pottery, among which I find several examples of pottery of recognised Hyksos type, which really belong to the Early Bronze Age, and date prior to 2000.

The net result is that the outstanding individuality of the civilisation predominant in Palestine prior to 2000 B.C. has almost completely vanished, and, as before, this is due to the invasion of another civilisation.

It must have been a period of maritime enterprise or of considerable commercial activity, which brought the Canaanites into contact with the peoples of Egypt and the islands of the sea. It is clear also that it was a period of warlike activity and national consolidation. The people walled their cities. Many well-known cities, such as Ta'anach, Megiddo, Lachish,

Jerusalem itself, and Jericho, were built or strongly refortified at the beginning of this age. This may account for the lack of originality and national individuality, as well as the tendency rather to purchase or imitate foreign ware in their potteries. The minds and energy of the people had already begun to concentrate on the preservation of their country against foreign aggression.

About the beginning of this period, somewhere near 2000 B.C., the Hittites arrived in Palestine. They are generally understood to have come from Cappadocia in Asia Minor. Many of the Amorite forts, which have been excavated, were captured, destroyed, and rebuilt at this time, while some forts were perhaps fortified for the first time by the conquering Hittites and the conquered Amorites combined. Lachish, Jerusalem, Gezer, and Jericho had been occupied and fortified by the Amorites themselves at an earlier date: but their ruined walls show that they had been destroyed and rebuilt about 2000, the new walls being earth ramparts with vertical stone-facing walls.

At this time, therefore, the Amorites suffered an eclipse, and had a foreign civilisation superimposed on their own.

It is curiously interesting that, contemporary with the arrival of the Hittites in Palestine, we should find this new class of pottery which we call Hyksos, and yet find no pottery which we can definitely describe as Hittite. No site excavated and published has even a single plate or page descriptive of Hittite pottery or other Hittite remains found in Palestine, but practically every site produces abundance of Hyksos ware. A great civilisation like the Hittite could not fail to leave abundant traces of its individuality, yet we find nothing that we can assign to them. We cannot dispute their presence in Syria and Palestine, nor can we regard their civilisation as identical with the Amorite. The whole problem seems to me to rest on the identity and origin of the Hyksos or Shepherd Kings of Egypt.

WHO WERE THE HYKSOS?

The origin of the "Hyksos" people is a problem which has never been satisfactorily solved. I venture to throw out one suggestion as a possible solution.

We know that long after the Amorites had made Canaan "the land of the Amorite," this great Hittite civilisation swept

down from the north-west of Syria or from Cappadocia in Asia Minor. By the time of Abraham the Hittites had penetrated as far south as Hebron. The Hittites conquered the Amorites in the north, and took their stronghold, Kadesh. In later times in Assyrian texts Canaan came to be known as "the land of the Hittite." The arrival of the Hittites in Palestine falls somewhere between 2000 and 1800 B.C. according to leading authorities. In fact, it coincides with the appearance of Hyksos pottery in Palestine.

According to Dr. Albright,¹ the first Babylonian Dynasty (2169-1870 B.C.), of which Amraphel (=Ammurapi) of Genesis xiv was the fifth king, was destroyed by a Hittite invasion of Babylonia about 1870-1742. The conquest of Palestine by the Hittites, he thinks, must date about the same period. We may thus safely assume that the Hittites had overrun Palestine by 1800, though we have no definite assurance that this is the date of their first appearance.

The earth-mound with glacis surface found at Tell el-Yahudiyeh in Egypt is now accepted as the fortification wall of the Hyksos fort Avaris. A similar earth-mound camp at Heliopolis is also accepted as Hyksos. In Egypt sand was used as being, naturally, most easily procurable. Two other sand-rampart camps which I excavated in Goshen in 1905, may be seen at Shaghanba and Rheyta near Belbeys. This form of fortification has come to be regarded as Hyksos.

The same method of fortification may be seen in Palestine near Kadesh on the Orontes at *El-Misrifeh*, which is the ruins of a fort seven times the area of Avaris. At *Kadesh*, now Tell-Neby-Mindu, is a third similar rampart. "These are compared with the Tepes of Transcaspia," and Albright concludes that "this was a Central Asian form of fortified camp, brought west at the Cossæan or Iranian migration, and known to us as a Hyksos form."²

Albright seems thus to connect the Hyksos with the Cossæans or Iranians. The fact that these earth-mound camps are found in that region around Kadesh, however, may just as well point to their Hittite origin. In fact, these sand-mound or earth-mound camps strengthen my suggestion that the Hyksos of Egypt were really an amalgamation of the Hittites and the Amorites of Palestine.

¹ *American Journal of Oriental Research*, October, 1926.

² *Ibid.*, *loc.*

The glacis surface of the Hyksos earth-rampart was replaced by vertical walls of stone where stone was easily procurable, and this became the main type of fortification wall in Palestine from 2000 B.C., after the immigration of the Hittites.

This "filling" wall is perhaps the explanation of the word *Millo*, a word which is itself probably Hittite.

Some sort of peaceable arrangement had been come to between the Hittites and the Amorites in Canaan. Whether

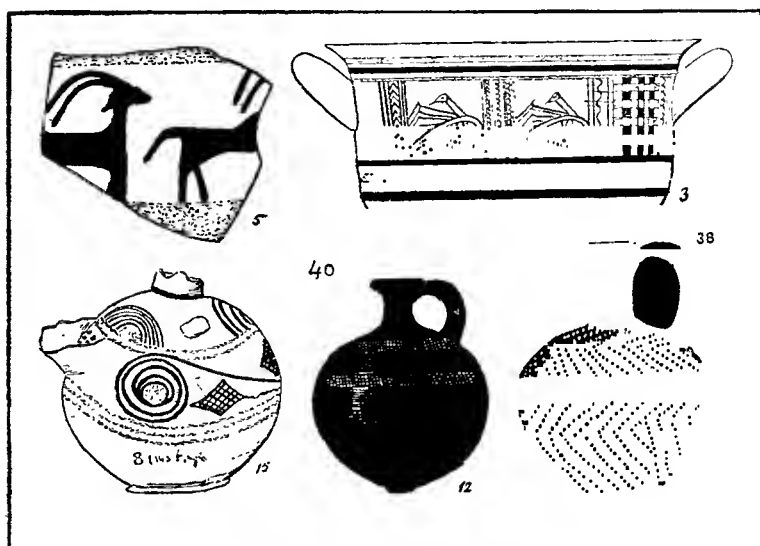


FIG. 11.—HYKSOS AND CANAANITE POTTERY.

the Amorites had been conquered and quietly submitted, or terms of peace and a league had been established for their mutual prosperity, is not yet known, but they occupied the southern part of Palestine on terms of amity together. Ezekiel (xvi. 3) upbraids Jerusalem in the words, "Thy father was an Amorite and thy mother a Hittite," thus indicating a tradition that Jerusalem was originally a Canaanite city founded and built by a combination of Amorites and Hittites. Manetho says the Hyksos built Jerusalem and fortified it when they were driven out of Egypt. Egyptian monuments imply a similar interlocking of Hittites and Amorites in the

north of Syria.¹ The Hittites also penetrated into Egypt and are depicted there on monuments.

Later it would appear from the O.T. that the Hittites and the Amorites retained a hold on Southern Palestine from Hebron northwards, and also on Northern Syria. Archæological discoveries have proved that they held the intervening portions of the country as well, though the O.T. leaves us in doubt. On monuments and in documents we find them both referred to in the south and in the north at Kadesh, but no reference to their presence or activity in the parts of the country between these limits. Excavation has now revealed their buildings and fortifications all over central Palestine.

By the time of King David (1050) the Hittites had retired far north, for in 2 Samuel xxiv. 6 we find (by the correct reading in the LXX) that David now held Kadesh, the Hittite stronghold, and the land around. Incidentally this verse confirms the capture of Kadesh by the Hittites from the Amorites (2 Sam. xxiv. 6), and authenticates itself also as historically accurate.

It seems, therefore, that the Hyksos are the result of an amalgamation between the Amorites and the Hittites, which took place somewhere about or prior to 2000 B.C., and what we call Hyksos pottery is probably Hittite. The Jebusites, who are credited with having originally fortified Jerusalem, took their name from the name which they gave to the fort itself, and the Jebusites were simply a fragment of the Hittite and Amorite amalgamation.

Ezekiel's tradition that Jerusalem was built by the Hittites and Amorites combined appears to be the truth, and Manetho's account may embody the same tradition. The Hyksos retired to a stronghold which their ancestors had previously built or fortified.

The Amorite civilisation was thus in turn overwhelmed by, or modified by, or incorporated in the Hittite prior to or about 2000 B.C., and as the chief foreign element from that time is Hyksos, it seems very probable that Hyksos and Hittite are identical.²

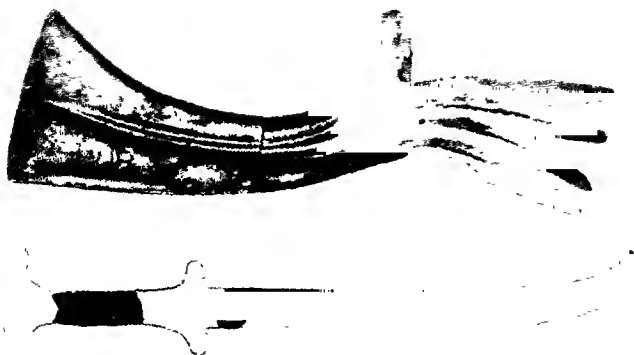
¹ Sayce, *H.D.B.*, art. "Hittite."

² From Prof. Hrozný's translation of the Hittite inscription of Anittas we learn that the Hittites were Indo-Europeans from South Russia, who invaded Asia Minor and conquered the Khatti c. 2000 B.C. The Hyksos are now supposed to have come from Central Asia and were in Palestine by 2375 B.C., prior to the Hittites. We should in this case modify our statement, and say that from 2000-1587 the people of Palestine were an amalgamation of the Hittites with the Amorites and the Hyksos who were there before them.



STONE
SCULPTURE
LOGOZKEN

THE KING SCULPTED FROM LOGOZKEN



STONE DAGGER, SCABBARD
FOUND IN THE MOUNTAINS OF LOGOZKEN
BEFORE 1920

THE DAGGER AND ANCHOR

LONG P. 74

STONE DAGGER FOUND IN AMERICA
Temple, Boston 1920



HYKSOS POTTERY II. BRONZE AGE

1. HYKSOS. 2. XVIII DYNASTY (16 CENT.) 3. 14 CENT. EGYPTIAN. 4. HYKSOS.

facing p. 7.

POTTERY OF THE MIDDLE BRONZE AGE

The pottery of this period is much more homogeneous than that of the preceding. The clay is more carefully refined, and white flint is ground to a finer powder before being mixed with the clay to give it hardness and consistency. The vessels are also better baked, and on the whole are thinner, though neither in crispness of baking nor in thinness can they compare with those of the next period, 1600-1200.

The characteristic types of the Early Bronze Age do not entirely disappear. Ledge-handle jars and cord-eye-handle vessels still occur in resuscitated form, though apparently very rare. The large amphoræ or water and oil jars, the small pointed-base juglets or dippers, for extracting the oil or water from these jars, are much the same. The fine, close burnishing, so characteristic of the Early Bronze period prior to 2000 B.C., still continues, but the vessels are not burnished to the same perfectly close glossy surface. The marks of the pebble are more easily traced. Apparently the superior method of baking made vessels less porous, and burnishing began to be used more for decoration. There is no doubt that burnishing was their substitute for fused glazing, which they had never learned from the Egyptians. It was employed chiefly to make the surface close, hard, and non-porous. Vessels could thus also be much more easily cleansed. In part, also, burnishing was a form of decoration. It continued to be used, though only for decoration, and in very much inferior form, down through Hebrew pre-Exilic times to 600 B.C.

As potters more thoroughly acquired the art of making their clay homogeneous and baking it more crisply, pebble-burnishing became more or less a conventional finish. Hence in the next two periods, the late Bronze period (1600-1200) and the Early and Middle Iron Ages (1200-600), pebble-burnishing becomes a mere series of parallel ornamental lines, sometimes unevenly done by hand, but generally done with fine regularity on the wheel. The pottery of Bethpelet, however, proves that this wheel-burnishing was used also in the Middle Bronze Age.

In this Hyksos period pebble-burnishing by hand is still fairly close and continuous, as in the Early Bronze ware and in the Naqada ware.

The fine combing of the Early Bronze Age also continues and persists throughout this period, but at 1600 it practically disappears, and is resuscitated in a rougher form of decoration later on.

From the pottery of this period alone, therefore, we conclude that the Hyksos period (2000-1600) is a continuation and development of the fine Early Bronze Age or Amorite civilisation of the previous period. It is still Amorite, but has certain notable and outstanding features from foreign sources which were unknown in the previous period.

HYKSOS TYPES OF POTTERY

1. One of the most characteristic Hyksos types of pottery of this period is the class of button-base loop-handle jugs. The name is no exaggeration. The base is so tiny in comparison with the body of the vessel that it is impossible for the vessel ever to have stood on it: and the form is so unique that there can be no dubiety in the identification of these with the same type of vessel found only on Hyksos sites. We found them at Tell-el-Yahudiyeh in Egypt, the ancient Hyksos fort Avaris. On the specimens found in Palestine the bases are even smaller than on those from Egypt. This may point to the Palestinian form being the earlier, and the slightly ring-base form of Tell-el-Yahudiyeh being the later development, which would accord with the idea that the Hyksos in Egypt were Canaanite invaders from Palestine.

The button-base is simply a flat narrow disc added to what was otherwise a pointed-base jug, and the vessels are of no great size. They vary from $3\frac{1}{2}$ to 12 inches in height. Most of them are piriform or spinning-top shape, though some have the lower part of the body slightly elongated, which detracts considerably from the gracefulness of the form. They are a development of the pointed-base dippers of the previous period, and the button-base tends to become a ring-base.

Some are plain and unadorned. Others have narrow painted bands in parallel rows round the body. Some have triangle patterns of painted bands, triangles being filled with dotted, incised lines in the same colour. The most characteristic type, however, is the vessel with a black body

and bands of white incised dotted lines round the widest part.

In these dotted bands the dots of white sometimes form a herring-bone pattern; and sometimes the dots form parallel lines in whatever direction you follow them. This black incised ware is specially characteristic of the Hyksos ware found at Tell-el-Yahudiyeh. The shoulder of the vessel is frequently decorated with dotted lines radiating in spiral shape from the neck. Many of these button-base jugs also are simply painted in a uniform colour, dark red, dark grey, and greenish yellow, with occasionally parallel alternating bands of other colours, very deep crimson and white, running round the body. These painted forms are, so far as my knowledge goes, confined to Palestine.

Many specimens with ring-bases are later developments or local imitations of this Hyksos type, the form being retained, but the base broadened for utility.

2. Another characteristic type of ware belonging to this period is the cylindrical jug with a double strand handle. The base is generally flat, but sometimes slightly convex. The body is a perfect cylinder, and of squat shape. The shoulders have a very gentle slope up to a narrow neck, and the handle is wide and somewhat clumsy in the Palestinian examples.

This type is also Hyksos, found at Tell-el-Yahudiyeh and elsewhere in Egypt. The only difference seems to be that the handle on the specimens from Tell-el-Yahudiyeh is not so clumsy and exaggerated as on the Palestinian forms.

Both the button-base jug and the cylindrical jug began to make their appearance in Palestine towards the end of the Early Bronze period, some years prior to 2000 B.C. They are found alongside of ware of that period. This implies that Hyksos influence was active in Palestine prior to 2000, a fact which has now been established by the Hyksos burials at Bethpelet, as already stated.

3. Another type of vessel showing Hyksos influence and belonging to this period is a clumsy elongated conical jug with no neck or spout, but with a small loop-handle running from the rim a few inches down the side. These have bluntly-pointed bases, and are exact duplicates of the well-known Hyksos handleless jugs, many of which we found at Tell-el-Yahudiyeh, in every respect except that the Pales-

tinian form has this awkward loop-handle at the top. They are sometimes 15 inches in height. It is a notable fact that the loop-handle is found in Palestine on the earliest forms of pottery known, while in Egypt it seldom or never occurs until later periods. Thus in Naqada ware the loop-handle is practically absent, though the ware is the same as the Early Bronze Amorite ware, in which the loop-handle is quite common.

In many examples of this type the button-base has become a short clumsy stump. These stumps are not elegant. It may be they were intended for setting in wet clay or sand.

4. Along with the pointed-base vessels we find pottery ring-stands, which are obviously intended for these vessels to stand on, so as to keep them upright. Where there was abundance of soft sand, the vessel could be "dug" into it and made to stand with no assistance. The ring-stand is a development to meet the different circumstances of the hard beaten floor of a house.

Though pointed-base vessels are common in the earliest Palestinian pottery, it is only in this period (2000-1600 B.C.) that ring-stands make their appearance in Palestine. This is curious, because we found them in abundance and of various forms at Naqada. They are quite common all over Egypt, and we found them among the Hyksos ware of Tell-el-Yahudiyeh (Avaris). The Hyksos examples from Tell-el-Yahudiyeh are the same forms as found in Palestine; and the same forms also occur in the Naqada ware. These ring-stands continued in use down through the Early Hebrew or pre-Exilic period till 600 B.C. They constitute a further link between Palestine and the Hyksos.

If these four types are found in Hittite pottery, there can be little doubt that the Hyksos and the Hittites are identical or in some way associated.

At Bethpelet in Hyksos tombs carinated bowls and large bowls rather flat or squashed in shape, along with the well-known small spout saucer lamps were found, so that it now appears that these types are also Hyksos in origin. These date from 2375 B.C.

AMORITE CHARACTERISTICS

There are other characteristic types of ware of this period, which cannot be definitely assigned to foreign influence, but are really Amorite.

1. The trumpet-base bowls, referred to above as perhaps Cypriote in origin, are probably small vases. Some of them are almost cyma-shape and suggestive of Cypriote ware.



FIG. 12.—FALSE NECK VASE, FROM CRETE.

They vary in height from 2 to 8 inches; in some cases the base is almost half the height, in others it is merely a heightened bell-shape ring-base, and many are painted.

They are the precursors of the pedestal bowls of the next period and the so-called libation vases of the early Iron Age of which many were found at 'Ain Shems.

2. The V-shaped bowls are common in this period. They were found in the later foreign ware of Naqada, dating

c. 4000 B.C., and in the Early Bronze period of Palestine. They form a link with the preceding period.

3. The Canaanite saucer lamp with round base and small pinched spout is first found in this Age: and crude imitations of the Egyptian cup and saucer lamp also occur.

This last-mentioned type is common in the next period, and was a puzzle to early excavators, who were not acquainted with it in Egyptian archæology. It was commonly regarded as Phœnician. It is really Egyptian.

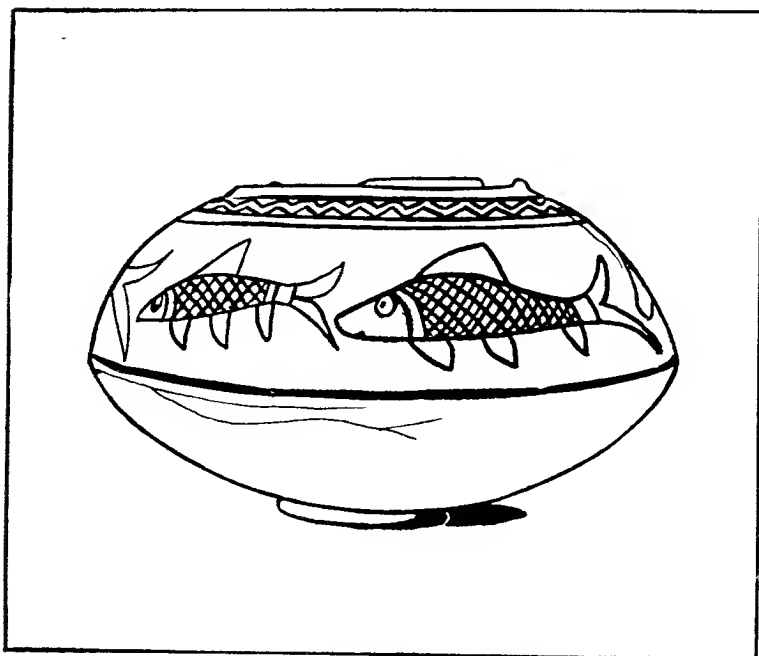


FIG. 13.—FISH DECORATED VASE FOUND IN BALUCHISTAN.

The oil was placed in the cup, and water in the saucer round it. The water prevented the oil from leaking through the pores of the cup. The blackened spout itself indicates its use. Alongside of the lamps are found standing cylindrical tubes of pottery sometimes expanding to a foot in diameter at the base, and with a moulded rim at the top. These are by some regarded as lamp-stands. They vary from 8 to 17½ inches in height. They are really frag-

ments of pedestal bowls which served as braziers or chafing dishes.

Similar cylindrical tubes of the Iron Age (c. 1000 B.C.) were recently found in Belgium, in a pottery factory at La Panne. These were used for drying small vases.

The solid or tubular ring with small lamps affixed to its surface, which sometimes communicate with the tube by a hole in the base, showing that in some cases the oil was put in the lamp only and in others was poured in the tube, seems to have been known also in this period. They probably ought to be assigned to the next period, 1600-1200 B.C., when they occur frequently (Fig. 14. 9).

4. Filter-fillers were made by piercing holes in the bottom of disused jugs. Jugs of the Hyksos type, No. 4 mentioned and shown above, seem to have been specially selected for this purpose—perhaps on account of their shape. Spouted jugs, spouted bowls, bowls with one or two loop-handles, bowls with three feet, baking-trays, and jar-stoppers, are all found in this period. The spout differs from the previous period in being usually much longer. Sometimes they are straight and narrow to the point. Often the point is bell-shape, and some appear to be phallic. On jugs the spout is often pinched on the lip.

In decoration, the potter of this period is much more ambitious and elaborate both in design and in the use of his colours. He attempts landscapes, figures of birds and other animals, trees and even figures of men. The metope and frieze decoration is also common both on Mycenaean imported ware and on local imitations. The burnishing and combing of this period have been described above.

THE THIRD BRONZE AGE

DATE LIMITS, 1600-1200

At the beginning of the sixteenth century B.C., the period which corresponds with the beginning of the XVIII Dynasty of Egypt, Egyptian influence was strong and Mycenaean ware also becomes very common.

Here, again, the difference is so marked as to justify our selecting 1600 as another date limit for convenience of classification. Ware directly imported from Egypt, and

Mycenean ware with local imitations of it, are as abundant from 1600-1200 as Hyksos ware in the previous period.

1200 has, until now, been accepted as the earliest date at which wrought iron begins to take the place of bronze in Palestine. It has accordingly been set down as the final date limit of the Bronze Age. It is also generally understood that by 1200 the Hebrews were in possession of the land.

During this period, 1600-1200, Egyptian influence was at its greatest in Palestine. The country was practically an Egyptian Dependency of the XVIII to XIX Dynasty kings. Jerusalem was held by a Governor who represented the Egyptian Pharaoh, as were also the important strongholds both in Palestine and North Syria. The Tell-el-Amarna Letters dating about 1450, and the Exodus of the Israelites with their subsequent influx into Canaan, also fall into this period. We probably possess more remains belonging to these 400 years, the last centuries of the Canaanite rule, than of the previous three periods combined.

Though the Israelites may have already been in Palestine for many years, yet at 1200 B.C. and perhaps for another hundred and fifty years, the Canaanites still held the land. It is indeed a very likely hypothesis that the Hebrew Occupation or Conquest was part of a great national movement for the recovery of Palestine from the dominion of Egypt and of those Canaanite satellites who had succumbed to Egypt; or that the Hebrew Conquest was greatly facilitated by the unsatisfactory state of the country as indicated in the Tell-el-Amarna Letters. In these Letters, unless the Khabiri are to be identified with the Hebrews, there is no definite mention of the Hebrews as the chief aggressors, who are threatening to overthrow Egyptian dominion and drive their Governors from the country. The conviction that the Khabiri of the Tell-el-Amarna Letters were really the Hebrews, or included them, is, however, being strengthened and confirmed more and more as our knowledge increases.¹

¹ The Khabiri are regarded as "Confederates," obviously bent on destroying Egyptian rule in Palestine, and the Hebrews may very well have formed part of the Confederacy.

THE POTTERY OF THE III BRONZE AGE

1600-1200 B.C.

The Period of Egyptian Domination—Dyn. XVIII-XIX.

Making.—In pottery of this period the wheel is used throughout, and tools begin to be used for trimming. It should be noted that in this period, as in the two preceding periods, though the wheel is constantly used, many examples of hand-made ware continue to be found. Hand-made saucers are so frequently found as to suggest that they did not use the wheel for these small vessels.

Material.—The clay used is the same as in previous periods, but carefully refined and cleansed. White flint ground to a fine powder, finer than in the previous periods, was mixed with the clay, so that the section and usually the two surfaces have a mottled white and red, or white and drab, or white and yellow aspect, due to the specks shining through the surface colour.

Baking.—The ware is fire-baked through and through, so carefully that the core shows practically the same colour as the exterior, and the dish is absolutely crisp and hard. All suggestion of lumpiness or “half-baked material” has vanished, and the ware resembles our own modern ware in its crisp finish, though it is thicker.

In this and in thinness it excels the ware of the previous periods. Air-bubbles, causing swelling inside and out, are of frequent occurrence: but the condition in which such jars or fragments were found shows that they had not been used, but thrown away as defective.

Slips.—Slips, usually consisting of a white glutinous coating or mere limewash, are of usual occurrence, but doubtless these slips have in many cases entirely disappeared, as in many specimens only parts remained.

So far, the Canaanites had not yet discovered the secret of glazing or enamelling the surface of their ware, although they must have been quite familiar with Egyptian fused glazing in this period.

It seems that the baked slip is the nearest to a glazed surface that they had attained to, and that it was not perfect is shown by the amount of ware found on which only traces

of a slip remain, or on which the slip has become so soft as to rub off with one's fingers. The finest slip used was probably composed of limewash or other white colouring matter mixed, perhaps, with the white of egg. In many cases a simple limewash was used. Sherds with slips on them were always chosen for writing purposes, as in the case of the ostraca of Samaria.

Burnishing.—The only other attempt made to produce a perfectly smooth surface, that would not harbour dirt, was by pebble burnishing. In the I Bronze Age this was done with great care, and a fine, close, highly burnished surface produced. In the II Bronze Age the burnishing is not so carefully done. The lines are more visible, and the surface by no means so close and glossy and smooth.

In the III Bronze Age the burnishing has degenerated so much, that it seems to have been used as a mere ornamental finish. The lines are not close, and there are plain unburnished gaps between them. In the best specimens, burnished on the wheel, the lines are very regular, and only slight ridges left between them. Where the burnishing is done by hand, the lines are very irregular, crooked, and often gaps are left with no gloss on them.

It is possible that the excellence of mixture and refinement of material, together with their skill in baking, made burnishing less necessary for the production of a non-porous vessel. This may explain why the burnishing of this period is so imperfect as compared with the I and II Bronze Ages.

Forms of Vessels.—The same types of vessels occur in this as in the two previous periods. They differ only in composition and occasionally in form. Amphoræ: loop-handle jugs and juglets; jugs with pointed bases, round bases, flat bases, ring or disc bases; bowls of the usual hemispherical or V-shaped types; bowls with one or two loop-handles; sometimes with short stumpy spout; bowls deep and shallow, all occur exactly as found in the preceding period, but differing in texture and baking. Lamps occur in great numbers, the usual saucer with small pinched spout; and hollow rings with a number of lamps attached to them also occur. Pottery ring-stands for holding pointed-base jugs erect are also common. The cup-and-saucer lamp and the hollow-ring lamps of last period are now very common. Perhaps they ought both to be assigned to this period.

New Types.—Of new forms which make their first appearance in this period, one of the most striking is the *cup-and-bowl* lamp above described.

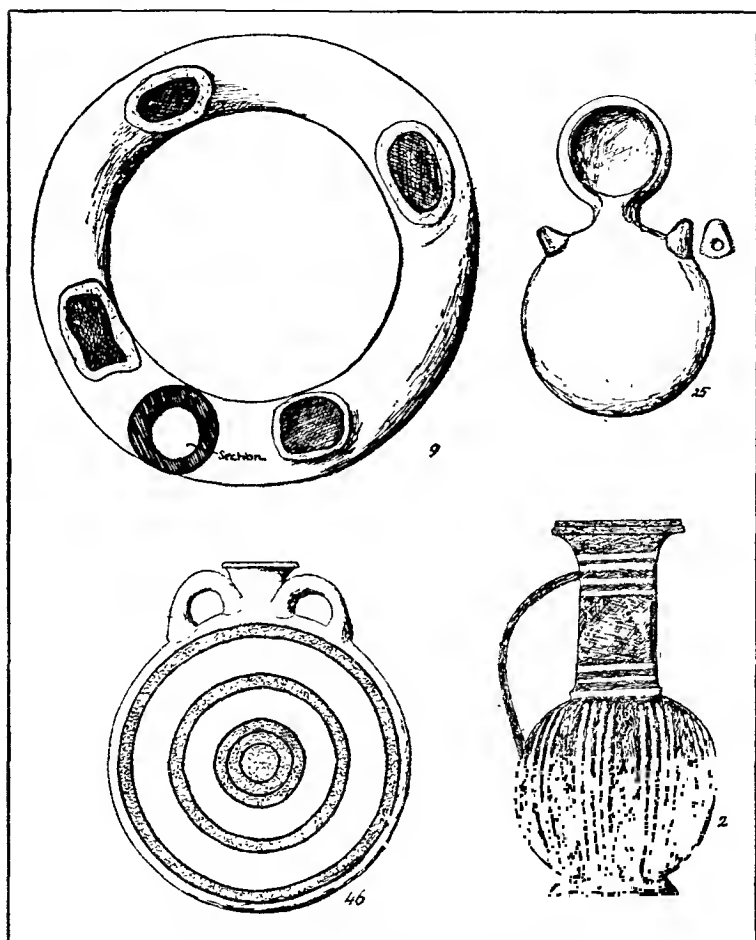


FIG. 14.—BRONZE AGE POTTERY—CYPRIOTE.

Nos. 2, 25, 46 = Cypriote.

Other new features are the burnished bowl with long bar and knob handle, and the bowls with tiny dwarfed loop-handles found in such numbers at Gerar. All three types occur after this period.

Another new type of bowl is the pedestal bowl, a development of the II Bronze trumpet-base bowl, generally described as an incense vase. These are sometimes of plain rough work, but occasionally decorated. They persist through the Hebrew period and are much more common then.

Among jugs, one new type becomes very common at the end of this period, the small, black-burnished juglet. This is also found in the Hebrew period in less graceful forms.

Foreign Influence.—As this period begins about the date usually assigned to the expulsion of the Hyksos from Egypt, (1587 B.C.), the beginning of the XVIII Dynasty, with the succeeding invasion and domination of Palestine by the kings of the XVIII and XIX Dynasties, we naturally find many traces of Egyptian influence. Examples, however, are chiefly confined to imported specimens of Egyptian blue-glaze pottery, scarabs, amulets, etc. The Palestinian potter seems to have been very little influenced by Egyptian work, and was never able to reproduce their fused glaze. Recent excavations at Bethshan have shown the extent of Egyptian influence, especially in matters of religion, at this time.

It is in this period (c. 1600) that Mycenaean ware first appears.

Countless specimens of Mycenaean or Ægean ware have been found at Gezer and other sites. The earliest of these are assigned to this period. Those identified as Mycenaean are mostly fragments of decorated ware, or of vessels which we know by their form or peculiarity of handle to be Mycenaean. They have the well-known glazed dark yellow slip with the pattern painted in dark reddish brown.

Local imitations of these also abound, but are easily distinguished, because the Palestinian potter failed to imitate the slip, and simply painted his pattern on the light brown surface of his own ware.

The chief forms that occur are the lentoid vessels and vessels with suspension handles, which are imitations of the Mycenaean pyxes. On Pl. 151 of Gezer, vol. iii, are specimens of painted sherds of Mycenaean or Ægean ware.

About 1200 B.C., towards the end of this period, Cypriote ware also begins to appear, with local imitations. Bowls, cyma-shaped with wish-bone handles, trumpet-base bowls, the ladder-pattern ware, the juglets, known as "bil-bils," with the crooked neck and the "pilgrim" flasks are specially common, both imported genuine specimens and local imita-



1. CYPRIOTE

2. MYCENEA AND PHILISTINE



1. CYPRIOTE

2. MYCENEA IMITATION AND PHILISTINE WARE.



BRAZIERS OR INCENSE-BURNERS AND LAMPS. 16-14 CENT.



PHILISTINE BOWL. 14 CENT.

POTTERY OF THE BRONZE AGE.

tions. These are a distinct feature of the XVIII Dynasty period in Palestine, and they persist in degenerate form down through the Hebrew period to 600 B.C.

It has been suggested that Cretan and Mycenaean ware found their way into Palestine through Cyprus; but Cypriote ware does not really show itself till about the twelfth century B.C. It is much more likely that Cretan and Mycenaean influence, which should perhaps be regarded as identical in Palestine, came straight from Crete. The Cretans, as excavation at Gerar (Tell Jemmeh) has shown, were growing grain in the southern plains of Palestine at this time, and the Philistines appear to have been settlers of theirs for this purpose, as necessity compelled them to import grain of which their own country could not grow enough to supply their needs.

Philistine.—It is in this period also that Philistine ware first appears, usually dated from 1300 B.C. downwards. Beautifully painted vases, such as were found at Bethshemesh, and other forms occur. Perhaps the most distinctive type is the jug with large "rhone-pipe" strainer spout. This type has been found at Gezer, Gerar, Bethpelet and other sites, and persists in the Hebrew period.

At Gerar some examples were found with cross-ridges on this clumsy spout, as if to catch any sand or other matter and further strain the water, as the drinker poured it into his mouth.

Decoration.—The outstanding feature of III Bronze Age ware, however, is the advance in decoration of pottery. Burnishing has been almost dropped, but painted designs are manifold and numerous. The paint colours used are mainly varieties of brown, red-brown, red, black, and white.

Of the designs, the spiral in one or other of its forms is of by far most frequent occurrence. We find spirals alone, single or double; spirals with rhombs or with birds; spirals centre-filled or in double lines shaded; spirals centre-filled and with the checker pattern; and other designs. Concentric circles and semicircles, and, allied to them, the nub pattern with dots, are also very common. Other geometrical designs are triangles: "double-axe," or triangles with apices joined, pattern; the checker, trellis, and ladder patterns. The scale pattern, resembling chain-armour, is probably taken from the scales of fish. Zigzag patterns, in single

crude lines, in double or triple triangular form or shaded zigzags, are perhaps as common as any design mentioned, and are frequently used to fill in space along with more elaborate designs. The tree-designs, trees with birds or other animals arranged in panels, are quaint and usual.

Among animal figures used the deer, gazelle, buffalo, and swan occur, the swan design being by far the most popular, the head being frequently under an uplifted wing. Figures

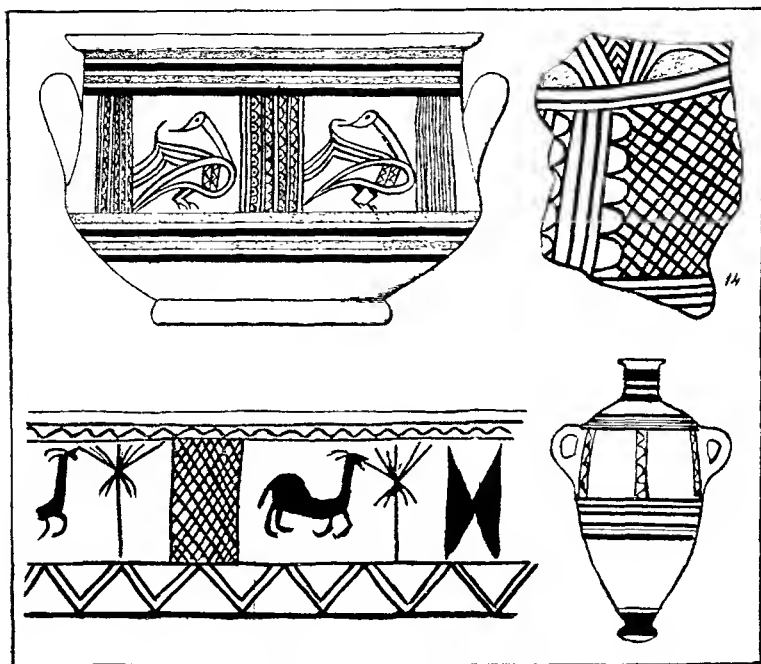


FIG. 15.—DECORATION OF BRONZE AGE POTTERY.

of men, negroes, some of them crudely drawn, also occur. As noted above, the swan design is probably of Cretan origin, and was brought to Palestine by the Hittites. It is found in crude form in Cappadocian ware.

Perhaps the most interesting is the octopus design, which is of rare occurrence, and seems to be of Cretan origin. The few examples that occur are indisputable. Perhaps what has been described as the radiating lines pattern is a variation of the octopus design, unless it be a crude representation of the date-palm tree.

III

CANAANITE CONSTRUCTIONS: FORTS AND FORTIFICATIONS, AND PALACE-FORTS OF THE BRONZE AGE

2500—1200 B.C.

CANAANITE CONSTRUCTIONS OF THE BRONZE AGE

1. FORTS AND FORTIFICATIONS
2. LARGE PUBLIC BUILDINGS.
3. DWELLING HOUSES.

INTRODUCTORY NOTE

THE CANAANITES

THROUGHOUT this account of archæological results I have used the term "Amorite" to describe constructions of the period prior to the arrival of the Hittites—*i.e.*, prior to 2000 B.C.; and the term "Canaanite" of constructions belonging to the period 2000-1200, when the "Canaanites" were the "Amorites and Hittites amalgamated." The Jebusites were simply a branch of this amalgamation. The Perizzites were the "metal-workers" among the Hittites, "parzi-ili" being the Hittite word for iron, which when adopted into Hebrew became "barzel."

The word "khatim" is the Hittite word for silver, and the "Khatti" or "Hittites" were named the "workers in silver," on account of their silver-mines in Cappadocia.

The Hivites or Achæans are the Hittite Akhkhîyawa. Thus they are all branches of one people, and the term "Canaanites" is best taken to mean "Hittites and Amorites amalgamated."

AMORITE FORTIFICATIONS

Excavation has revealed the fact that the Amorites were predominant in Palestine from 2500 B.C. or earlier. We are not surprised, therefore, by the frequent references to them in the Old Testament or by the fact that, at a very early date, Palestine was known on Babylonian monuments as the "Land of the Amurru" or Amorites. It is literally true. Palestine was the "Land of the Amorites" at the period when Abraham migrated with his family and long before

that time. They built cities "walled and very great," as the spies reported (Num. xiii. 28). They were the "children of Anak" of the same report.

We are now able to give some description of their walls and fortifications.

By 2000 B.C. they had a line of forts stretching practically across the Plain of Esdraelon to the Jordan. Megiddo, Ta'anach, and Beth-shan form a segment of a circle with the concave side to the north. There is no doubt that the first two were fortified prior to 2000; and when Beth-shan mound has been fully explored, it will, without doubt, be found to have been an early fortification of the Amorites. The Old Testament adds Dor and Ibleam to this line of northern forts (Josh. xvii. 11; Judg. i. 27). This line was intended to check inroads from the north. On the south there is a more elaborate series of forts running right from the maritime plains on the west to the Jordan on the east. Gezer, Mizpah, Jerusalem, and Jericho form a strong inner line of forts on the south. Further south Gath, Beth-shemesh, Azekah, Socoh, and Hebron form another outer line against inroads from the south and Egypt, while still further south Gerar,¹ Beth-pelet,¹ and Beersheba (?) formed the southernmost line of defence.

Megiddo, Shechem, Gezer, and Lachish defended the western boundary, while Bethshan, Ai, whose walls were revealed the other day, Jericho, and Hebron commanded the entrances from Jordan and the east.

The whole of Palestine, from the Plain of Esdraelon in the north, to Hebron and Lachish in the south, and from Megiddo, Gezer and Lachish, Gerar and Bethpelet on the west, to Bethshan, Jericho, and Hebron on the east, was in the hands of the Amorites. This means that they occupied the hill country exactly as is stated by the spies in Numbers xiii. 29: "The Hittites and the Jebusites and the Amorites dwell in the mountains." They consolidated their conquest by these elaborate series of forts. That their cities were "walled and very strong" is perfectly true.

Of these forts all have been excavated to some extent, except Beersheba and Hebron. Of Beersheba practically nothing is known archæologically, and it is doubtful if it was ever fortified. On the hill Rumeideh, opposite modern

¹ Tell Gemme and Tell Fara, excavated recently by Sir Flinders Petrie.

Hebron, there are the ruins of ancient walls of Cyclopean masonry, which mark the site of the early Amorite and Davidic town. At the foot of the hill on the east side there is a deep spring, known now as the Well of Sarah ('Ain Jedideh). The presence of this spring confirms the identification of the hill as the site of ancient Hebron, since where water could be found it always formed a determining factor in the choice of a site. No excavation has been done here. The hill is covered with olive-trees and a few modern buildings.

At Shechem and Ai only a little has been done, but that has revealed the fact that both were early Canaanite forts. Walls of Cyclopean masonry have been found at both sites, but so far no details have been published.

Of the five northern forts Dor and Ibleam have not yet been definitely located or excavated. The other three have been partially excavated.

All five played an important part in the period of the Conquest, and each appears to have been impregnable. In Joshua's list of "smitten kings" Megiddo and Ta'anach appear (Josh. xii. 21), but this can only mean that their kings or Amorite governors had been defeated in battle, for in Joshua xvii. 11 and Judges i. 27 it is definitely stated that Manasseh never succeeded in driving out the Canaanite inhabitants of these two forts, or of Dor, Ibleam, or Bethshan. 1 Chronicles vii. 29 mentions the five as belonging to the inheritance of Joseph, but says nothing of their capture. The next occasion on which they figure in Old Testament history is in Judges iv. and v. 19, when Jabin, "King" of Hazor and his captain Sisera oppressed Israel and were defeated by Deborah and Barak. In v. 19 we learn from Deborah's Song that there was a coalition of Canaanite governors and that Jabin was assisted by the governors of Megiddo, Ta'anach and probably the other three as well, "Then fought the kings of Canaan in Taanach by the waters of Megiddo," and the river Kishon played a part in the battle. Even on this occasion there is no mention of the capture of these strongholds, so that it is quite clear that, though Israel could beat the Canaanites in the field, they were helpless against the strongholds when the defeated Canaanites retired to them. From this Song of Deborah (verses 7 and 11) we gather that the Israelites,

as I suggested elsewhere, inhabited only rural villages and apparently these Amorite "kings" or governors harassed and destroyed them by continued sallies from their strongholds.

By the time of Solomon, however (1 Kings iv. 11, 12), all five strongholds had succumbed to Israel, and in the list of Solomon's twelve officers or governors four of them are mentioned. Dor was governed by the son of Abinadab, and Baana was in charge of Megiddo, Ta'anach, and Bethshan. This is further confirmed by 1 Kings ix. 15, where Megiddo is mentioned as having its walls repaired by Solomon, a fact which has been corroborated by archæology.

It is quite probable that all these northern forts were captured by David. That they were not held by Saul, or if held by him were lost to the Philistines, is indicated in 1 Samuel xxxi., where Saul is defeated at Gilboa and the Philistines "came and dwelt in the cities." Though verse 7 might seem to imply that the Israelites had held the forts in this region before the battle, and fled from them on the defeat of Israel, archæological discoveries at Bethshan leave no doubt that the Philistines had held at least Bethshan for a considerable period before the battle; and this is perhaps implied in the Old Testament narrative. The battle of Gilboa was fought undoubtedly to check the inrush of the Philistines from the maritime plain, who wished to possess the plain of Esdraelon for its farming value.

In 2 Kings ix. 27 Ibleam and Megiddo figure in connection with the death of Ahaziah, King of Judah, about 869 B.C., and again in 2 Kings xxiii. 29-30 Josiah is slain by Pharaoh Necho at Megiddo about 609, an incident referred to also in 2 Chronicles xxxv. 22 and Zechariah xii. 11. Armageddon is simply Har Megiddo, the Hill or Mound of Megiddo.

From these passages it is quite plain that these five northern strongholds played a very important part in the history of the Israelites, and if we had the narratives of a writer of the Northern Kingdom there is no doubt that we should know a great deal more of the part they played in its history also from 960 downwards.

MEGIDDO STONE AND BRICK WALL

The Amorite fort at Megiddo covered an area of 20 acres. The wall was 938 yards in length. This fort was thus three times as large as Jericho and Bethshemesh, a fourth larger than Zion, a third less than Gezer, and half the size of Lachish.

The wall was built of large, flat, sun-dried bricks measuring 26 by 14 by 4 inches, mixed with quarter-bricks measuring 13 by 7 by 4 inches. At 12 feet above the foundation there were three courses of field stones undressed, with 8 feet of brick wall above them. At 20 feet high there were again three similar courses of undressed stones, on which the upper section of the brick wall rested. The same occurs on the latest wall of Jericho.

As the foundation itself consisted of similar courses of field stones laid in mud-mortar on the rock-surface, these courses of stones in the wall may have been intended as fresh foundations to strengthen the brick wall. They may, however, represent a stone coping of the top of the wall at different periods. The original wall may have consisted of 12 feet of bricks with a coping of stones some feet deep. As debris accumulated inside the fort, the walls would have to be heightened. They were next raised to 20 feet, with another such coping of stones and mud on the top. These stone and mud courses may thus represent successive additions to the height of the wall, and such a coping would be a protection against rain or onslaught.

At the top the wall was 12 feet thick. Midway it was 23 feet, and at the base 20 feet. There had thus been a bulge of the wall of 3 feet at the centre, such as is referred to in Isaiah xxx. 13 ("a breach ready to fall, swelling out in a high wall"), due to the absence of weep-holes in its construction.

A CITADEL WITHIN THE CITY—THE NORTH TOWER

Megiddo supplies an excellent example of a citadel within the city, such as we have always conceived the "Millo" of Jerusalem to be. Such a tower is mentioned in Judges ix. 51, in Thebez near Shechem.

This citadel of Megiddo is a rectangular tower on the

north side where attacks were most to be feared. It measures 38 yards north to south, and about 33 yards east to west. Its inner wall is 6 feet thick, except on the north, where it incorporates the city wall. Internally it consisted of a large central court (65 by 47 feet) open to the sky, with small rooms running round its west and south sides. These had been roofed with clay and reeds on wooden beams. Stone roof-rollers were found, but these may belong to a later period. The masonry was a mixture of stone and bricks. In the stonework the stones were laid in horizontal and oblique courses alternately. This is a feature of Megiddo masonry, found nowhere else. The wall was a rampart or "filling" wall, with two built faces and rubble filling between them. At the top the brick wall was only 2 feet thick.

On the west, outside of this wall, a moat or trench 8 feet wide, and 6 to 10 feet deep, was cut in the rock. Here the remains of an infant foundation sacrifice were found buried.

Beyond the moat was an outer wall of more slender proportions, but consisting of a stone wall with a brick wall above it. This wall as found was a later repair, but the debris of the previous brick wall mixed with ashes was found outside of it.

The citadel is part of the original Amorite fortification, but had been refortified by Solomon as the masonry indicated. The rock-cut trench recalls that on the north and most vulnerable side of the ancient Zion.

TA'ANACH

Ta'anach is of great interest and importance, because here excavation has thrown a clear light upon the methods which David and Solomon adopted for guarding the frontiers of their kingdom.

Two small garrison forts or towers, with a powerful out-work tower attached to one of them, have been revealed. These "towers" had been built over the ruins of early Amorite fortifications, the ruins of which were found beneath them by the excavators.

The earliest Amorite fortifications had been built of sun-dried bricks, some of them square, measuring $14\frac{1}{2}$ inches each way, by 4 inches thick; and others rectangular, measuring 19 by 14 by $5\frac{1}{2}$ inches. These bricks were found at

two parts of the mound, and some had been burned, probably in a siege. The interesting point about these bricks is that most of them bore stamps. Some of these stamps are circular, some oval. Others consist simply of one or two straight lines impressed on the clay. These are not the names of the maker or builder, but simply potters' marks, and are identical with the potters' marks found on pottery of the late Early Bronze or Early II Bronze Age (about 2000 B.C.).

This brick stratum extended both east and west, beyond the limits of the north-east tower described later, showing that these early Amorite constructions were entirely demolished long before the later tower was built over them by David or Solomon. The size of the bricks suggests that bricks from the oldest Amorite fort had been reused by David or Solomon.

More interesting still, and to some extent puzzling, is the fact that on the top of this brick stratum, yet on a lower level than the stone-walled fort, the remains of brick-built houses were found, and the bricks of the ancient Amorite constructions had been used in building these houses. Under the west wall of the Solomonic north-east tower were found also bones and sherds, which would belong to the period when these houses were inhabited.

The history of Ta'anach seems, therefore, to be somewhat as follows:

The Amorites had built a brick-walled fort on the mound somewhere prior to 2000 B.C. Later, when these brick walls had been destroyed, probably by the Hittites, a fort with stone walls of the usual "Cyclopean" style of masonry had been erected: and here we are perhaps justified in tracing the work of the Hittites who, as stated elsewhere, seem to have been more accustomed to, or more in favour of, stone-walled fortifications. In this stone-walled fort, built by 1800, the material is a very hard limestone brought from a distance.

This stone wall was the wall of the period of Joshua, and the governor of Ta'anach is mentioned in Joshua xii. 21 as one of the many conquered by him. Whether the fort was captured by Joshua or not, the site reveals the fact that, between 1400 and 1000, this stone wall was destroyed, and for some time the place remained unfortified.

During this period there had been a village settlement on the mound, and the inhabitants, in digging for foundations to their houses, found these early Amorite bricks, and used them.

This period of village occupation may thus correspond with the period of the Judges of Israel, and very likely these brick houses are the earliest settlements of the Hebrews on the mound of Ta'anach.

Later, when David and Solomon had acquired possession of the country as far north as Damascus and Tadmor, it became necessary to build some kind of fortifications on the mound to defend their northern frontier against invasion.

Only a small section of the early stone wall of the Canaanite fort was found. This wall was of Cyclopean masonry, as referred to above, but it should be noted that the rock face on which it rested was scarped, as at Gezer (p. 107). There is an idea in the minds of archæologists that rock-scarping underneath the city walls is not a Canaanite feature, but begins in the Hebrew period, as late as David or Solomon's time. If this is justified, then we must at once infer that this stone wall had been rebuilt in David's time, and that the towers found on the site are correctly attributed to Solomon. The stone-walled fort, if rebuilt by David, must have met with disaster very soon. By the time of Solomon it was in ruins, and he used much of the material in building the three "towers" which are regarded as his work.

Sellin thinks that the village settlement immediately succeeded the destruction of the early brick wall, and that the stone wall was built after the village settlement was destroyed.

The indisputable facts, which we have got here, are as follows: First, there was a very early brick-wall fortification by the Amorites. This was destroyed and replaced by a stone wall of the usual Amorite and Hittite type. It was also the work of the Canaanites of the land. Later still this stone wall was destroyed; and some time afterwards Solomon used its materials in building three small garrison forts.

At some period prior to 1100 there had been a village settlement, the houses of which were built of bricks from the earliest Amorite walls.

Apart from the scattered bricks of these walls, and the section of the stone wall, the only other fortifications found on the site are these three towers attributed to Solomon.

Sellin found five different strata of occupation on the mound, which he dated as follows :

1. Stratum 1a, the earliest, 2500-2000.
2. „ 1b, „ „ 2000-1300.
3. „ 2a, „ „ 1300-1000 (Judges).
4. „ 2b, „ „ 1000-800.
5. „ 3a, „ „ 800-500.
6. The Arab stratum on the surface.

Of the Neolithic cave-dweller period, only a few empty caves were found ; but this, along with the caves on Gezer mound, establishes the fact that the cave-dwellers of the lower country used natural mounds in which to make their dwellings.

The Solomonic forts at Ta'anach are described under Hebrew Fortifications.

THE HOUSE OF ISHTAR-WASHUR, TA'ANACH

Towards the north of the mound, another fortified construction was found, the masonry of which is practically the same as that of the west fort, but it is in such a state of ruin that even a ground plan was impossible.

Within this building was found a number of cuneiform tablets, which belong to the Tell-el-Amarna series. At one time there had stood here a building which had been the fortified residence of a governor named Ishtar-Washur, of the fifteenth century B.C. (*cf.* Josh. xii. 21) : but whether these ruined foundations are the remains of the original residence, or of a later Solomonic fort built over its site, it seems impossible to decide. If the masonry is the same as that of the other three, this must have been a fourth Solomonic construction on the mound : and Sellin regards the masonry as emphatically the same.

Sellin, however, seems to have regarded the west fort as a Canaanite construction of the sixteenth to fifteenth century and the other two as Solomonic.

The Amorite fortification, however, seems undoubtedly to have been a walled town, with towers at various points

around it: and it probably included the whole surface of the mound. In Solomon's time there appears to have been no city or city wall, and the place was held by these three or four garrison forts.

The tablets undoubtedly point to the residence of a governor within the city, when it was a walled fort of the Canaanites in the fifteenth century. Such governors are described in the Old Testament as "kings," but are really only commissioners of the Amorite or Babylonian kings.

BETHSHAN

Very little is known yet of the earliest fortifications at Bethshan. The excavation of the mound has added a great deal to our knowledge of its temples, religion, pottery and other details, but so far only the stratum of the XVIII Dynasty has been reached (sixteenth century). The Philistine occupation has been confirmed by pottery. A temple has been set down as the Temple of Dagon, while another has been identified as the House of Ashtaroth referred to in 1 Samuel xxxi. 10, where the Philistines placed the armour of Saul. An altar showing Cretan influence confirms this occupation by the Philistines probably about 1100-1050. The wall of the town on which they fastened the body of Saul has also been uncovered, but until the mound has been excavated to its lowest depths the earliest Amorite occupation will not be revealed, and meantime work is suspended. There is no doubt, however, that the occupation of Bethshan dates back to the earliest Amorite immigration. The site occupies too important a position for defence against inroads from both north and east to be left unfortified.

The volume on Bethshan in preparation has not yet been published, but the Pottery Plates which have been placed at my disposal for use in my Corpus of Palestinian pottery show Mycenaean and Cypriote influence, as well as well-known Philistine types, and prove Canaanite and Egyptian occupation from the sixteenth century downwards.

SHECHEM IN THE OLD TESTAMENT

The name appears in Scripture in the three forms Shechem, Sychem, and Sychar.

The patriarchal narratives of the Old Testament imply that

Shechem was a Canaanite town in the period 2000-1600 B.C. Abram visited it (Gen. xii. 6). Jacob bought a parcel of ground there, and buried his idols under an oak-tree near it (xxxiii. 18; xxxv. 4); and Joseph visited it (xxxvii. 14).

In the period of the Conquest there is no record of its capture, nor is its king in the list of smitten kings (Josh. xii.); but in Joshua xvii. 7 it is allotted to Ephraim and in xx. 7, xxi. 21 it is appointed one of the six cities of refuge, which implies that it was by then in the hands of the Hebrews. This means that Joshua captured it by 1200. According to Genesis xxxiv., where the incident regarding Dinah is related, Shechem was inhabited in Jacob's time by Hivites—*i.e.*, Hittites.

In the period of the early settlement Shechem became the headquarters of the religious and civil life of the Hebrews, the great meeting-place, just as Mizpah was in the time of Samuel. Here Joshua summoned all the tribes to meet him, and here also the bones of Joseph were buried (Josh. xxiv. 1; 32).

When Gideon, otherwise known as Jerub-baal, refused the offer of kingship over Israel (Judg. viii. 22), his more ambitious son Abimelech succeeded in persuading the men of Shechem to make him king, and they financed him with seventy pieces of silver from the treasure of the Temple of Baal-berith, their god. This same passage informs us also that there was a Beth-Millo in Shechem, which can only have been a citadel within the city or an additional "tower" fortress near it (see Judg. ix. 4, 6, 20). If Shechem was a Hittite fort this is interesting, as Millo is very probably a Hittite word; and if this Millo of Shechem could be found, it would throw light on the Millo problem of Zion. So far it has not been unearthed, but very little excavation has been done at Shechem. We might note also that Abimelech's name means "My father is king," as if his father Gideon had actually reigned over Israel. His words to the Shechemites (Judg. ix. 2) imply the same; while Jotham's parable (ix. 7-20) and the passage viii. 22-23 distinctly state that Gideon refused kingship.

The destruction of the town by Abimelech (ix. 45), who sowed its ruins with salt, has been verified, and the Temple of Baal-berith located. The tower outside the city (v. 46) has not been located. The town must have been rebuilt very

soon after its destruction by Abimelech, and Shechem continued to be the "meeting-place" for all Israel, for it was here that "all Israel came to make Rehoboam king" (1 Kings xii. 1; 2 Chron. x. 1). The passage, however, suggests that "all Israel" here means "all the tribes except Judah," and that the distinction between Judah and Northern Israel was already an understood fact. It was "all Israel" (1 Kings xii. 18) who refused to pay taxes and stoned Rehoboam's revenue officer Adoram, and it was "all Israel" who made Jeroboam king of the Northern Kingdom. Shechem must thus have been the recognised centre for the northern tribes in Solomon's time. It was natural, therefore, that Jeroboam should make Shechem his capital and proceed to refortify it or strengthen its defences (1 Kings xii. 25). It did not, however, remain the capital of the Northern Kingdom for many years. Soon after this Omri built Samaria, which then became the capital, and Shechem took a less important place in the life of the nation. Other references in the Old Testament are Jeremiah xli. 5; Psalms lx. 6; cviii. 7. From the Old Testament narratives Shechem thus appears to have been a Canaanite fort occupied by Hittites in the Middle Bronze Age, built and fortified to defend the western frontier. It is practically midway between Megiddo and Jerusalem or Gezer. It played a prominent part both in the period of the Conquest and in that of the early kings. It continued to be occupied down to the last century B.C., and close to its ruins still stands the modern town Nablus (Neapolis). It is one of the most promising sites that still await full excavation in Palestine. Its ruins are situated on the hill now known as Balata, and Sellin's excavations, so far as they have gone, confirm the information gleaned above from the Old Testament.

SHECHEM

The hill of Balata, about one mile east of the modern Nablus, is the site of the ancient Shechem. Here Sellin conducted excavations prior to 1914, and work has recently been resumed. Four periods of occupation have been distinguished on the site. An early Canaanite occupation dates from 2000-1400. Next comes the early Israelite occupation from 1400-

900, which is interrupted about 1100 by the destruction of the city by Abimelech. This is succeeded by the later Israelite occupation from 900 downwards, and this again was replaced by the Hellenistic occupation. Of the ancient walls of the fort traces were found, with a great tower. In one large public building a large hall with pillars, a judgment-hall, perhaps, was discovered. As in other sites, it was again found that the palace or residence was a fortress-palace. In the architecture of the gates there are points of resemblance with the gates of Bethshemesh, and the excavator suggests Hittite influence. The writer in *Revue Biblique* (April, 1927), however, seems to see a closer resemblance to the description of the gates in Ezekiel xl. 6 *seq.*, which we refer to also under Mizpah Fortress I.

Besides these architectural evidences of Canaanite occupation, there were found also in a burial a collection of bronze weapons, which includes a fine curved sword, a Hebrew family altar assigned by the pottery of the stratum to the eighth to seventh century. This small altar was apparently a square block, 24 inches high and 14 inches broad, with a cup on the top for incense-burning and a boss or knob at each corner of the top. Another similar altar, 36 inches high with near it six censers and not far off thirty-five "oil-bottles" was also found. Ostraka with Aramaic writing were found in the stratum of the fifth to fourth century. The Canaanite fort had been destroyed and restored in the "Old Israelite" period. By this Sellin means presumably that it was taken by the Hebrews on their arrival, which he seems to place as early as 1400, and refortified by them at once. Three clay figurines of Astarte of the usual type were turned up, and everywhere were evidences of Babylonian and Egyptian influence. The temple has also been found built on a terrace about 87 feet long. It is Egyptian in style, and behind it are buildings which presumably were the quarters of the royal priests. In a heap of bones of oxen and camels and rubbish—sacrificial remains, probably—was found a necklet of gold.

Quite recently nineteen stone seats, some of them chairs, others settees for two people, have been found at Shechem.

These are formed of one block of local stone, are all straight-backed, without arm-rests, and hollowed out in front to accommodate the feet. Originally there had been two semi-circular rows of seats, one behind the other, but what purpose

they served it is impossible to say. Some had the names of the "occupiers" or "donors," one a woman, inscribed in Greek on the back. In size one of them, as an example, was 29 inches high, including the back. The seat was 15 inches high, 11 inches deep, 19 inches wide at the back, and 12 inches wide at the front. The narrowing at the front was intended to make them fit accurately into the semicircle. They appear to have been votive offerings, as indicated by the words *ευχαμενος ανεθηκα* on one and *ευχαμενη-ι* on the lady's chair. Further excavation is necessary to discover what building these belonged to. They belong to a late period.

The detailed results of Sellin's recent work are not yet published. From these results it is apparent that Shechem was a Canaanite fortress dating from at least 2000, as implied in the Old Testament narratives, and the details show that it closely resembled other such fortresses elsewhere described, with a fortified palace for the governor which included a Hall of Justice, if not a Treasury. That the excavator suggests Hittite influence in the architecture is a striking confirmation of the passage Genesis xxxiv. 2, where the ruling family is described as Hivite, which is only a variation of the Hittite Akhkhwaya or "Achæans." There is, however, no difficulty in supposing that the architecture suggested Hittite influence, since in this Middle Bronze period the Hittites were the predominant race in Palestine, though amalgamated with the Amorites, and practically every fortification was built or repaired under their influence, so that even Ezekiel's description of the gates in chapter xl. must itself show Hittite influence.

The fort had been taken by Joshua, as Sellin finds a break which he dates about 1400, and regards as the beginning of the earliest Hebrew occupation. The destruction of the town by Abimelech about 1100 was also traced. The Temple of Baal-berith has been discovered, and evidences found that it had been built during the Egyptian domination of the XVIII-XIX Dynasties (1600 to 1350).

So far as the work has proceeded the results agree with the history of Shechem in the Old Testament, and indicate that very much more important results must come from the future excavation of the site. The type of masonry and the dressing of stones in masonry attributable to Jeroboam would be of great value and interest. A later report states that no mazzebah or pillar such as is referred to in Judges ix. 6 has

been found so far ; but two massive city walls, each with a "monumental gateway" have been uncovered ; and the citadel, the Beth-Millo, has been identified. A full description has not yet been published.

AI—ET-TELL

Ai is twice referred to in the wanderings of Abram (Gen. xii. 8 ; xiii. 3) as being to the east of Bethel. The next reference to Ai occurs in Joshua vii.-viii., where it was taken by the Hebrews on their arrival and completely destroyed. Joshua viii. 17 implies that Bethel was so near to Ai, that its inhabitants felt their fate to depend on that of Ai and accordingly joined the inhabitants of Ai against Joshua. The King of Ai is mentioned as one of the smitten kings in Joshua xii. 9, and here also Ai is described as beside Bethel.

The site of Ai has been identified with the "mound" Et-Tell, a little to the east of Bethel, but only soundings have been taken. These soundings, however, have revealed the fact that this mound had been occupied by the Canaanites down to the Late Bronze Age, *c.* 1600-1200, but had been then destroyed and never subsequently occupied, which exactly corresponds with the narrative of Joshua. The site awaits excavation, but it is clear that Ai had been a Canaanite fort of defence on the eastern side.

That it was not the only fort on the eastern side built by the Canaanites goes without saying. It is mentioned here as one of the sites that have been examined. Similarly it is not at all likely that the western frontier was defended only by Megiddo, Shechem, and Gezer. There were probably other forts between them, but these three are the only sites of which we have definite knowledge from excavation.

GEZER IN THE OLD TESTAMENT

The first mention of Gezer in the Old Testament is in Joshua x. 33, where we learn that, on Joshua's attacking Lachish, Horam, the Canaanite governor of Gezer, came to the assistance of the governor of Lachish. The palace of this period (1400-1200 B.C.), which was probably Horam's residence at Gezer, is described further on. No mention is made in the Old Testament of an attack by Joshua on Gezer, but he is credited

with defeating Horam in the field, and in the list of "smitten kings" Gezer occurs in Joshua xii. 12. In Joshua xvi. 10 and Judges i. 29 it is definitely stated that Ephraim never succeeded in driving the Canaanites out of Gezer. Gezer, however, is mentioned as a western boundary of the territory allotted to the tribe of Joseph (xvi. 3 and 1 Chron. vii. 28), while, along with Shechem, it was given as a city of refuge to the children of Kohath the Levite (Josh. xxi. 21; 1 Chron. vi. 67).

In 2 Samuel v. 25 and 1 Chronicles xiv. 16 David smites the Philistines from Gibeon to Gezer, and in 1 Chronicles xx. 4 there was war between David and the Philistines at Gezer. This seems to imply that the Philistines had been anxious to get possession of Gezer, but they had never succeeded in accomplishing this, for not a scrap of Philistine pottery or other evidence of their presence was found in the excavation of Gezer.

Gezer remained an unsubdued stronghold in the hands of the Canaanites till the time of Solomon, and then it was not Solomon who captured it, but the Pharaoh who became his father-in-law. This Pharaoh broke down the wall on the north side, took the fort, and handed it over to Solomon as a dowry for his Egyptian wife. The repairs afterwards executed on the walls by Solomon and the destruction of the wall by the Pharaoh have been revealed in the excavation of the site (1 Kings ix. 15-17). These are described below.

GEZER

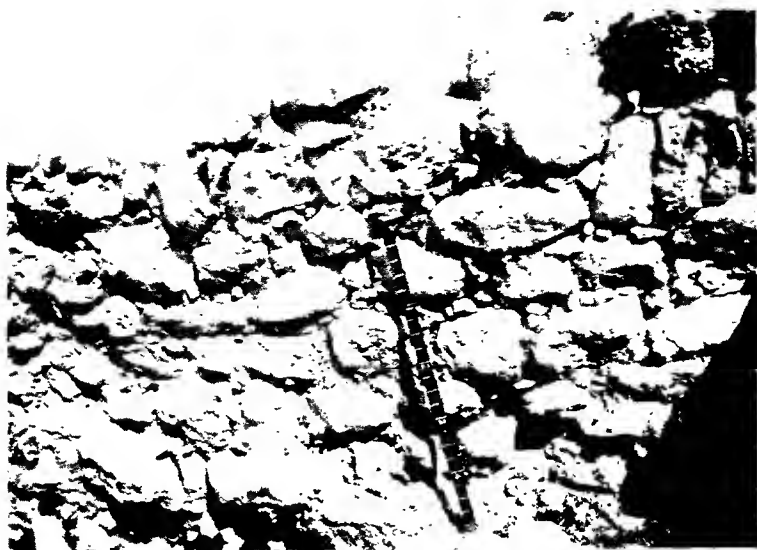
Right opposite to Jericho, guarding the western frontier, on the lower slope of the hills above the maritime plain, the Amorites built the fortified town of Gezer. Here they must have encountered a powerful tribe of cave-dwellers, for there is a wonderful series of underground dwellings on the mound, and many indications of occupation by the cave-dweller. The aboriginal cave-dweller had to give way to the more highly civilised Amorite. His caves, cup-hollows, presses and other equipments became the property of the Amorite, and some of them at least were used for the Amorite's own purposes, such as burial, etc. What became of the cave-dweller there is little to show; but he seems to have lived on good terms with the new arrivals, benefited by their civilisation, imitated their pottery designs, and become merged in them,



GEZER—OUTER WALL—LATE BASTION REMOVED TO SHOW EARLIER
TOWER



GEZER—OUTER WALL—TOWER WITH LATE BASTION BUILT ROUND IT



GEZER—INNER WALL—THE MASONRY



GEZER—INNER WALL WITH EARTH RAMPART IN FRONT
CANAANITE FORTS.

adopting their customs and mode of life, till he finally disappeared altogether, and cave-dwelling became a thing of the past.

Of the three walls which he found, Macalister dates what he considers the earliest fortification of Gezer about 3000 B.C. This wall, situated between the other two, is a mere rounded earth mound, 18 feet thick and $6\frac{1}{2}$ feet high, faced outside and inside and over the rounded top with field stones. It is known as the middle wall of Gezer, but it looks much more like an earth-rampart thrown up to assist in storming the inner wall of Gezer than a city wall; and perhaps that is what it really was,¹ a "dayeq," such as is referred to in 2 Kings xxv. 1, and translated in the LXX by the Greek word *περιτείχος*.

In this case the inner wall of Gezer would be the oldest, but it also must have been built before about 3000-2500, unless we assume that it had been preceded by an earlier brick wall, in which case this inner wall must date between 2000 and 1800, and had been built by the Hittites. It is 13 feet thick, and built of hammer-dressed blocks, with mud mortar. The masonry is the same as in the third wall of Jericho. It may be that the Amorites found it necessary to fortify on the east side of their territory long before the necessity arose on the west, and that this may explain why there is almost nothing at Gezer corresponding to the early brick walls of Jericho. In fact, it may be that Gezer, like Jerusalem, was not fortified until the Amorites and Hittites had amalgamated, and that this is the earliest wall of Gezer, but we discuss this point later on.

Some of the blocks in this wall measured 4 feet long by 18 inches high, and they averaged 20 to 24 inches square. These blocks were laid lengthwise, and the wall was fairly well bonded. It rested, not on the rock, but on 1 foot of debris. This argues a previous occupation, and the debris may be that of former sun-dried brick walls that had been demolished, as is very probable.

There were two gates in the Gezer of this period: one on the north and one on the south side.

The north gate tower was of stone. It was a massive

¹ Such a construction is referred to in 2 Kings xxv. 1, where it is termed a dayeq (דַּיֵּעַק). This word is a foreign word like Millo, and may well have come into Hebrew from the Hittite or Amorite language.

construction, 150 feet long. The gate passage entered at one side, and came out in an adjacent side, thus forming a right angle, as in the Jaffa and Damascus Gates of Jerusalem today.

The south gate is a narrow, straight passage, $42\frac{1}{2}$ feet long and 9 feet wide. It is entered between two towers built of sun-dried bricks, which average 15 by 12 by 4 inches in size. Each tower is roughly 28 feet long. The west tower projects 8 feet and the east 10 feet from the wall face. Each side of the entrance passage was lined to a height of 6 feet with three limestone slabs, set some distance apart, and intervening spaces were filled with masonry. This lining was obviously intended to prevent the soft bricks being worn away by loaded animals passing in and out. They explain the purpose of the well-known pilaster slabs found at Tell-el-Hesi (Lachish) by Petrie.

These gate-towers give a definite idea of the massiveness of both brick and stone fortifications erected by the Amorites, even at their earliest arrival.

Taken along with other facts, these brick towers and the 1 foot of debris below the inner wall suggest that the earliest fortification of Gezer was of sun-dried bricks, as at Jericho, and dated as early as 3000 B.C. This earliest city had been destroyed completely, only these two towers having been left; and after a short time, the inner stone wall had been erected.

The destruction of this earliest brick-walled city was apparently the work of the Hittites, about 2000 B.C., and the earth rampart was very likely thrown up by them to assist in their attack. It is now known that earth ramparts were a feature of Hittite constructions. The inner stone wall was built, as at Jericho, by the Hittites and Amorites after their amalgamation, on the ruins of the brick walls.

This inner stone wall of Gezer stood from about 2000 B.C. to probably about the fifteenth century.

It then met with disaster, perhaps at the hands of the Egyptian kings of the XVIII-XIX Dynasty, who at that period were in possession of most of Palestine, having just driven out the Hyksos. If the Hyksos were the amalgamated Hittites and Amorites, nothing is more likely than that their conquerors of the XVIII Dynasty in Egypt pursued the Hyksos into Canaan, and stormed their principal strongholds.

A new stone wall, known as the outer wall, was erected in place of the inner wall destroyed. This wall is of inferior masonry. It was 14 feet thick, and enclosed an area of 27 acres, or more than three times the size of Jericho at its largest. Trenches were cut in the debris to allow the wall to rest on the rock, and the rock face was scarped under the wall to give it more height, and to allow no foothold close up to it. Towers were built into it at regular intervals.

The masonry in it is of three different types. Between the towers, the masonry is the same as in the inner wall; and on the east side the inner wall is practically incorporated. The towers, except three which belong to the earlier inner wall, are of finer masonry: and on the north side there is a breach in the wall which had been repaired by a later hand. This breach shows the masonry of Solomon, and the better-built towers are also his work. These are the repairs to Gezer by Solomon, spoken of in 1 Kings ix. 15-17.

Thus the probability is that Gezer was originally fortified by the Amorites between 4000 and 2500 with a brick wall of which only two brick gate-towers and a mass of debris remain. This wall stood till the inrush of the Hittites, who demolished it, and on its ruins the Hittites and Amorites erected what Macalister describes as the inner wall of stone. This inner wall of stone had in its turn been demolished, and the materials had been used to build the outer stone wall, which encloses a much larger space. In Solomon's time this outer stone wall was partly demolished by his father-in-law, the Egyptian Pharaoh of the time,¹ and Solomon repaired it, adding new towers of better masonry. What Macalister describes as the middle and oldest wall, seems too insignificant to have been a town wall.

TOWERS OF GEZER

Besides the gate-towers of the inner wall, there were towers built all round it at regular intervals of about 90 feet. These towers were 41 feet long and 28 feet thick; and some,

¹ This Pharaoh must have been Pasebkhanu II, who reigned 987-952 B.C. (*E. and I.*, p. 67).

probably all of them, had rooms. These towers had probably all been bonded to the wall.

In the later outer wall the towers were at less regular intervals, and joined the wall by a straight joint, as if they had been thrust in at a later date. The three older towers incorporated from the inner wall were, however, bonded to the wall.

On the towers "thrust in," the stones are dressed diagonally with a $\frac{5}{8}$ inch chisel, the same dressing as I found on the Tower of Ophel, and as was found at Megiddo and Ta'anach. It is clear, therefore, that these are the repairs for which Solomon made the levy, as narrated in 1 Kings ix. 15-17.

This dressing is recognised as Solomonic, and this masonry is the only masonry common to all three sites.

At a later date, probably by Bacchides, who held Gezer during the wars with Syria, rounded casings of stones and earth were thrown around these towers to strengthen the straight joints.

MIZPAH IN THE OLD TESTAMENT

Joshua xviii. 25-26 locates Mizpah as near to Gibeon, Ramah, and Beeroth. Beeroth is now identified with the modern village El Bireh, near Ramallah, 10 miles N. of Jerusalem, close to which are ancient ruins and a cemetery of oblong graves cut in the rock with rebatement at the top for receiving a covering slab. The reference is clearly to Mizpah of Benjamin.

In Samuel's time it was the great place of assembly for the people, and to Mizpah Samuel called them when he had a message for them from the Lord (1 Sam. vii. 5, 6; x. 17). Here the people assembled (1 Sam. vii. 6) "and drew water and poured it out before the Lord," this being part of the ceremonial sacrifice, apparently. Where water is scarce, as in most parts of Palestine, the pouring out of water may be sacrifice indeed. It is probably the high place of Mizpah that is referred to in 1 Samuel ix. 12 and x. 5.

Mizpah was also one of his circuit towns where he met the people, probably at stated times, to execute judgment and settle disputes among the people, as we learn from 1 Samuel vii. 16, where Mizpah is associated with Bethel as being in the

same region (*cf.* Judg. xx. 1). The site of Bethel is thought by some to be Beeroth, but recent examination locates Bethel a few miles further north.

The place was fortified, along with Gibeah, by King Asa (940-900), who took away the stones and wood of Ramah to carry out this work (1 Kings xv. 22 ; 2 Chron. xvi. 6). This fact is corroborated by Jeremiah xli. 10. When Nebuchadnezzar took Jerusalem about 597 and carried away Zedekiah, he appointed Gedaliah as his resident governor, and Gedaliah removed his headquarters to Mizpah. It was at Mizpah that the murders were enacted by Gedaliah as related in Jeremiah xl. 6 to xli. 18. Mizpah is referred to also in Nehemiah iii. 7 and Hosea v. 1.

The name means watch-tower and is frequently used in that sense. The excavation of Tell-en-Nasbeh has discovered the site and proved that it was an important Amorite fort from the early Bronze Age downward. The period of Hebrew occupation is discussed under that chapter.

MIZPAH—TELL-EN-NASBEH : EARLY BRONZE¹

Professor Bade, who is excavating this site, has found a walled city which was about 8 acres in extent, practically the size of Jericho, and of the same period as the earliest Amorite fortification of Jericho, somewhere prior to 2000, much of the pottery belonging to the earliest Bronze Age, and much from the tombs that is earlier than 3000, though apparently not cave-dweller ware. Mizpah had thus been a very early Amorite fort and had certainly been fortified in the Amorite-Hittite period.

The city wall, which, he claims, "alters all preconceived ideas of the strength of Amorite fortifications," varies from 15 to 18 feet 9 inches in thickness, and so corresponds in size with other walls of that early period already spoken of. Its average thickness would be about 16 feet. It is of stone, and of that class of hammer-dressed polygonal masonry with crevices filled with chips which we call Cyclopean masonry; but no full report is yet published.

In two tombs he found about 200 jugs, bowls, jars, cups and other pottery, some of which he classes with Macalister's

¹ From *Quarterly Statement*, October, 1926, January, 1927, and July, 1927.

pre-Semitic (2500-1800), and some he considers even earlier still. An interesting type is the double-cup, which has not yet been found in Palestine before,¹ but was found at Naqada.

The foundation platform of a great tower was almost the first thing he struck—at only 2 feet below the surface. It had formed part of the city wall, which enclosed the whole surface of the mound (8 acres). Two towers flanking this corner citadel and bonded to the wall had frontages of 30 feet each.

For the Hebrew occupation, see under Hebrew Walls and Constructions.

More recently (1929) in a large cave on the eastern slope were found fourteen skeletons and a quantity of Early Bronze Age pottery in the lowest stratum. In the next stratum the pottery was of the Middle Bronze Age, and the cave had then been used as a dwelling.

Pottery Kiln.—Near the mouth of the cave was found a small kiln filled with pottery made of a greenish clay that had never been fired. This kiln belongs to the Early Bronze Age, and seemingly some catastrophe had happened to prevent its being fired (Bade). In the Middle Bronze stratum many objects of great interest were found, including a terra-cotta couch of unique design.

The cave confirms the occupation of the site from the Early Bronze Age, and shows the same absence of Late Bronze Age remains as was noted in the strata within the city area.

JERUSALEM

In Genesis xiv. (*cf.* Ps. lxxvi. 2) Jerusalem is named Salem simply ("peace"), in Joshua xv. 8 Jebusi, Judges xix. 10 Jebus, and in the Tell-el-Amarna Letters Uru-Salim, "the City Peace." In 2 Samuel v. 7 it is named Zion, City of David. The earliest reference to Jerusalem occurs in Genesis xiv. in the incident of the rescue of Lot by Abraham. The governor of that time is named Melchizedek, which means "Righteousness is my King." Melchizedek thus appears to have been the Canaanite governor of the period between 2000 and 1600, and to have combined the office of Priest of El Elyon, the Amorite God of the Mountains, with his position as governor. In Joshua's time the king's name was Adonizedek, "Righteousness is my Lord," so that the word

¹ See Naqada Pottery.—N.B., Petrie and Quibell.

"Zedek" (righteousness) must have had some special significance in connection with the ancient city, either as the name of the special deity, or as emphasising his attribute, or as referring to the fact that the kings or governors of Jerusalem were "priest-kings." Joshua defeated Adonizedek, and he and his four allied governors are described as "kings of the Amorites" (see Josh. x. 1, 5). From this special mention of the Amorites we may perhaps infer that the Hittites left the Amorites in charge of Jerusalem, for tradition undoubtedly claimed that the city had been founded by the Amorites and Hittites combined (Ezek. xvi. 3). In other forts in the same way the inhabitants are spoken of as being Hittites. In Joshua xii. 10 the king appears in the list of "smitten kings," though Joshua did not take the city. In Judges i. 8, however, it is recorded that Judah captured Jerusalem and burned it; and in the time of Samuel and Saul the city was still in the hands of the Hebrews (*i.e.*, c. 1100-1080), since David brought the head of Goliath to Jerusalem (1 Sam. xvii. 54).

When Saul died, however, and Southern Judah accepted David as king, Jerusalem must have stood out against him, and it was only after seven years' reign in Hebron that he succeeded in capturing it (2 Sam. v. 6 *ff.*) from the Jebusites, a word which means simply "inhabitants of Jebus" and probably included many Hebrews as well as Canaanites mixed. (see Judg. i. 21; Josh. xv. 63).

Taking Judges i. 8 with these two passages it would appear that though Jerusalem was taken, the Canaanite inhabitants were retained in the city and not driven out: unless we assume that after burning Jerusalem the Hebrews did not occupy it but allowed the Canaanites to reoccupy and fortify it. In Judges xix. 12 Jebus is "the city of a stranger" and "not of the children of Israel."

From 1030, when David took the city, it remained the capital of all Israel and latterly of Judah down to its destruction in A.D. 70. In the reign of Rehoboam, about 960, it was plundered by the Egyptian King Shishak (XXII Dynasty) (1 Kings xiv. 25). Later Sennacherib attacked it about 700 B.C. but abandoned the siege (2 Kings xviii. 19, etc.). It was twice taken by Nebuchadnezzar. On the second occasion (c. 597) he carried away the remainder of the people captive to exile in Babylon, and left the city so desolate and depopulated that it sank into insignificance till the restoration by Nehemiah in 440.

The city has had a very chequered history, and the continual changes in its fortunes have left their mark on the archæological remains of the site. Added to this is the fact that from its foundation it has been so unceasingly occupied, built and rebuilt, that every succeeding occupation has almost destroyed all evidences of previous civilisations.

The Old Testament narrative claims its existence as an Amorite fortress in the Middle Bronze Age at least (2000-1600), and implies unbroken occupation from that time onwards.

Excavation has confirmed these facts, though there is evidence of an even earlier occupation. The site, however, is what is known as a mixed stratification. The strata do not succeed each other in unbroken preservation, but are completely muddled by the digging of foundations for later structures down to the rock and by successive clearances, when the whole accumulation of ages within the city was thrown over the walls. It was quite impossible, therefore, to dissociate one period of occupation completely from another.

It is now accepted with practical unanimity that the site of ancient Zion, City of David, is not, as used to be supposed, the western hill of Jerusalem, but the small spur of rock, now known as Ophel, running down from the Temple Hill to the Pool of Siloam and the junction of the Kidron Valley with the Valley of Hinnom—a site which was inaccessible on every side except the north, where it was defended by specially strong fortifications. Excavation on the western hill has never revealed anything that could be assigned to a very early date. Its occupation, so far as I could learn from observation of cuttings made for foundations of modern houses, does not date back beyond the time of the Maccabees. On Ophel we found complete confirmation of the Old Testament narratives. Ancient Zion occupied this small spur of rock, and was so wonderfully fortified that the Jebusite boast of the lame and the blind being able to hold it even against David was no vain one. Ophel gave evidence of unbroken occupation from 2000 B.C. down to Arab times.

As the original Canaanite fortifications were still standing throughout the Hebrew period and down to A.D. 70, the details are discussed fully under Hebrew Occupation.

JERUSALEM—JEBUS—ZION

No trace of a brick-wall fortification has been found on Ophel, the site of ancient Jerusalem. The walls found are all of stone. This is what we should expect, if we are right in saying that the Hittites preferred stone to bricks; for Ezekiel has indicated that Jerusalem was fortified by the amalgamated Hittites and Amorites. Ezekiel xvi. 31, 45, "Your mother was an Hittite, and your father an Amorite. As is the mother, so is her daughter," can scarcely be understood in any other sense.

Manetho has also preserved the tradition that the Hyksos built Jerusalem as a stronghold for themselves, when they were driven out of Egypt in 1587. As we have stated elsewhere, both passages are probably correct, if we regard the Hyksos as the outcome of the Hittite and Amorite amalgamation, except that in any case Manetho's statement can only mean that they refortified or repaired its walls.

On this supposition, Jerusalem cannot have been fortified by the Hittites and Amorites at a date much earlier than 2000, since the arrival of the Hittites is dated at 2000-1800.

Yet traces of the Early Bronze Age civilisation as well as of the cave-dweller have been found in considerable quantity on Ophel. Cave-dweller ware and burials, early Amorite ware, cup-hollows, high places, and presses, all dating from 3000-2000, have been found on the rock surface and in the Great Cave. These leave no doubt that the cave-dweller occupied the site and was replaced by Amorite immigrants of the earliest period.

It may be that the earliest Amorite occupants did not fortify the site. They certainly dwelt on the rock surface. If they dwelt on it or fortified it, they must have used stone from the outset: and this is very likely, for the soft white limestone of Jerusalem could be quarried with less labour and expense, and more easily, than bricks could be made.

It may be, therefore, that the earliest walls which we found on Ophel are to be regarded as the first fortifications of Jerusalem, built by the Amorites themselves as early as 2500. At the north end of the city, in Field 5 of the plan of Ophel, just where the slope of the Temple Hill ends, slender walls of crude masonry were found, along with a moat-like trench, cut in the rock surface.

Traces of a double-wall fortification were found here, an outer wall of some 13 feet thickness, and a very slender inner wall about 5 feet thick, the two enclosing between them a natural cleft in the rock to serve as a sort of moat.

This cleft had apparently been extended eastwards, by artificial cutting, and this cutting closely resembles the narrow rock-cut moat between the two walls of the citadel or north tower at Megiddo.

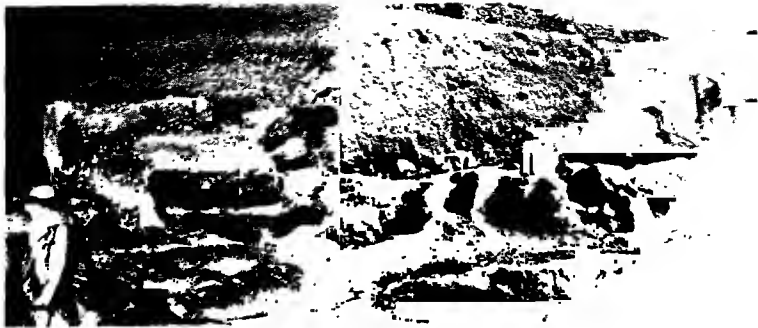
The outer north wall built on a scarped rock foundation, as we found it, is certainly late: but this inner north wall was only 5 feet thick¹ at the north-west corner, and 3 to 4 feet thick where it ran southwards to exclude the artificial moat.

Only fragments were found, and as they are so slender, they may have been facing walls of an earth rampart. They were built of hammer-dressed polygonal blocks, with mud-mortar and chips, as found at Jericho and Gezer. It is, therefore, quite probable that the Amorites occupied Jerusalem before they were conquered and absorbed by the Hittites, and that the inner north wall with the south-going wall and the artificial rock-cut trench are part of the earliest Amorite fortification.

If these belong to an Amorite fortification of Jerusalem, as early as 2500, they are the only fragments of that period which remain intact.

The northern outer wall is a much more massive construction of a later date, probably of the period 2000-1800 B.C., and the masonry was of the same type. The rock foundation on the rock scarp showed that it had been 13 feet thick, and the stones used were polygonal blocks of great size. A section of this wall, which had been battered in from the north, or had fallen, lay scattered over the field, some of the courses being still *in situ*, and the boulders of the upper portion having fallen as far as 20 yards south of the foundation of the wall. The wall must thus have been of a considerable height. Though this wall was standing in David's time, the supposition that this was the breach made by David when he took the city about 1050 B.C. lacks evidence to support it. Dr. Macalister did not remove this mass nor examine the debris under it, so that we cannot affirm that the pottery under it supports the contention. On the other hand, the blocks which fell some distance south of the main mass lay in the Macca-bæan stratum (160-50 B.C.). This would indicate that this

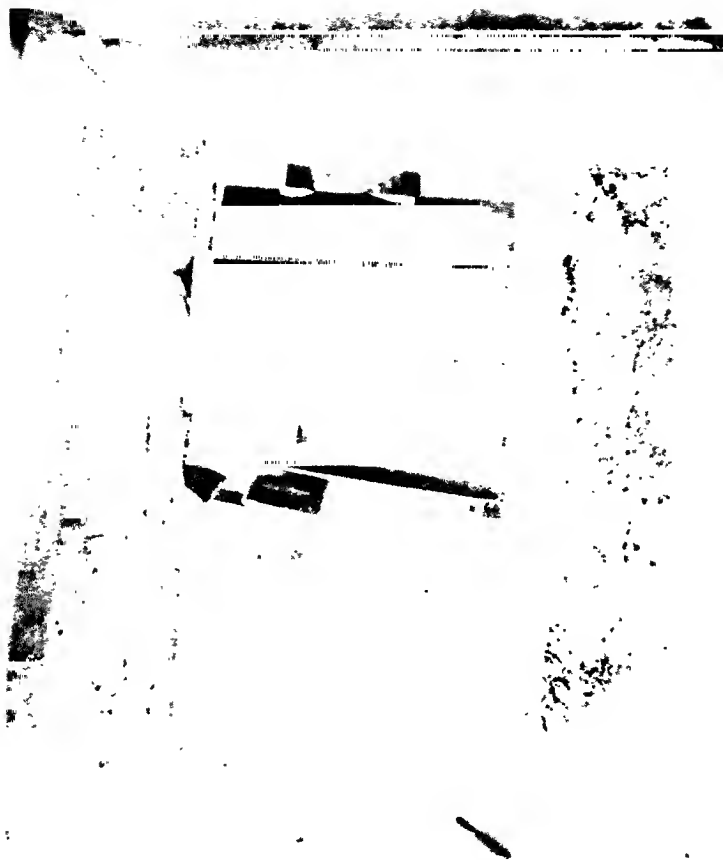
¹ Macalister puts it at 3 feet 9 inches thick,



ZION—ROCK-SCARP OF OUTER NORTH WALL.



ZION SECTION OF JERUSALEM INNER NORTH WALL
CANAANITE FORTIFICATIONS



ANCIENT GATEWAY OF ZION.
(See page 202)

facing p. 115.

northern outer wall had been ruined or pulled down at a much later date, probably in the attack by Antiochus.¹ There are reasons also for inferring that David's attack was at a point below the south stair bastion on the east wall, where there is a large breach which had been repaired by David himself. This is discussed under The Walls of the Hebrew Period.

Between these two northern walls, at the west end, the intervening space was 30 feet wide. Where the inner wall turned southwards, this space became very much wider.

At Jericho, we found that of the double-wall fortification, the outer was the weaker and the inner the stronger. Here the reverse is the case, as is perhaps to be expected. Traces of towers found showed that they all projected inwards, which is quite usual in Amorite forts.

NOTE.—It has now been proved from Tell Fara that the Hyksos appear in Palestine as early as 2375. If, as I suggest, it will ultimately be found that the Hyksos and the Hittite civilisations are one and the same, Manetho's statement receives further confirmation and Jerusalem may have been fortified by 2300. This does not alter the fact that evidences of a purely Amorite occupation were found above the cave-dweller remains.

THE MILLO

I have already made the suggestion (p. 114) that the space between these two northern walls may have been a Canaanite citadel at the north end of the fort, such as the north tower at Megiddo (*q. v.*).² The space is irregular, but the area is larger than that of the north tower of Megiddo ($\frac{1}{4}$ acre), and not too small for such a citadel.

The "Millo"³ of Jerusalem was undoubtedly just such a citadel within the city, and this seems to me to have been the site of the original Millo. As we find at Megiddo, the inner wall was slender in comparison with the outer or northern wall of the citadel.

The great tower and stair bastions on the east wall of Zion, I am convinced, were part of the "Millo" fortification. Josephus says David captured the lower city, but failed to take the "upper city." If David broke through the east wall at the point where I found a section repaired by him, he

¹ Or when the Maccabeans levelled down the fortifications themselves, as Josephus states.

² For such a "tower," see Judg. ix. 51.

³ The word "Millo" is probably a Hittite word. It is supposed to mean "filling," which is quite likely, since Hittite fortifications were earth-filled ramparts.

would have captured the lower city ; but if there were a citadel or upper fort in Zion, his entrance at that point could not have given him possession of it.

It seems to me that Josephus has here preserved the true facts.

THE EAST WALL OF ZION—JEBUSITE

When we come to discuss the east wall of the Canaanite stronghold, we are on very much firmer ground.

This wall ran along the eastern edge of the rock, and kept close to it throughout its course, so far as it has been traced, except at one point where a flat platform of rock surface, 30 feet wide, was left projecting outside of it. This is the point where the wall was breached and repaired by David, 30-40 yards south of the south stair bastion.

The wall itself is a "Millo" or "filling" wall. It consists of an outer and an inner built face, each about 3-4 feet thick, the interior being filled with blocks, chips, and a little earth. The outer face tells plainly of the many storms and changes through which it has passed. Masonry repairs of five different periods are traceable on its surface.

In fact, from the number of repairs on this section of the east wall, just south of the great tower and bastions, as well as from the fact that it was found necessary at a later date to support it by an outer wall, it is quite clear that this section of the east wall was a favourite point of attack.

We uncovered the inner face of this eastern wall for several yards in Field 5.

The wall is 27 feet wide where we struck it at 10 feet below the present surface. I uncovered the outer face of it to a depth of 23 feet, and the great tower foundations to a depth of 20 feet below that. At its base, therefore, this massive east wall must have been about 35 to 40 feet thick, and at its highest it had been about 20 feet thick or more. The masonry is of the usual early Amorite type, as found at Gezer, Jericho and elsewhere, large, hammer-dressed, polygonal blocks, untooled and unshaped, laid in mud-mortar, the interstices being filled with chips and mud. The inner face of the wall has a considerable batter on it.

The face of the Jebusite sections was thickly plastered with lime-mud over the joints, and the great tower had been lime-washed over its face, so that it must have appeared a dazzling

white mass in the time of David. The plaster may, however, belong to a later period, perhaps the work of Hezekiah.

The 400 feet section which I uncovered consists of :

1. A Maccabean tower at the northern end.
 2. A short piece of the early wall, with Maccabean repair on the top.
 3. The Jebusite north stair bastion.
 4. The Jebusite glacis, converted into a tower by David, with repairs by Solomon on the top, and by Hezekiah and the Maccabees or Nehemiah on the face.
 5. The south stair bastion.
 6. The Jebusite wall continuing south in Field 9, above the cave mouth, with Arab walls of houses above it; an Arab street which had pushed out a Solomonian repair, and Arab plastered cisterns built on to the face of it.
 7. Three of the lowest courses of the Jebusite wall for 10 feet; and, for the next 5 feet, twelve courses of Jebusite wall fill up a natural cleft in the rock face, just abutting on the modern sewer, which cut through the wall here and demolished it.
 8. South of the sewer the Jebusite wall resting on the rock surface, now 10-12 feet deeper, was traced for $18\frac{1}{2}$ feet.
 9. At this point a breach 22 feet long had been made right down to the rock surface. This breach was rebuilt with Davidic masonry. At $10\frac{1}{2}$ feet there is a vertical off-set on the wall, and at 22 feet my excavation stopped.
- The farmer of the next field, however, showed me the Davidic repair, continuing and serving as the back-wall of his courtyard and tannur, or baking-oven, so that the breach here, made where the platform of rock projected from the wall, had been at least 40 feet long.
10. Built on to the south edge of the great tower, by a straight joint, is an outer wall, which I have attributed to Hezekiah, and which cannot be much later, if indeed so late. This wall is about 8 to 10 feet thick, and was traced to the extreme limit of Field 9 of my permit.

As all these constructions were standing *in situ* in Hebrew times, and some of them are the work of the Hebrews themselves, it may be best to describe them under the walls of Jerusalem in the Hebrew period; and as my account of these discoveries has been only partially published, I shall describe them at length.

JERICHO IN THE OLD TESTAMENT

Jericho is not mentioned in Genesis xiv., though, perhaps, we might have expected it to be named. In Numbers and Deuteronomy it is spoken of as a prominent place for location. "In the plains of Moab by Jordan, near Jericho," is a frequently occurring expression in Numbers.

In Joshua ii. is recorded the visit of the two spies who sojourned with Rahab, and in this chapter the important passage is verse 15, where it is stated that "her house was upon the town wall." Here the word translated "town" really means wall, so that the expression literally runs "her house was upon the wall of the wall, or parapet of the wall," thus implying that the wall of the city was of one material and had a parapet, as was actually found to be the fact in excavation of the site. It is significant also that the narrative throughout speaks only of "the wall," showing that the wall of that period was a single wall, and the original writer had probably never heard of the double walls that preceded it.

In Joshua vi. the capture of the town by Joshua is described, and here verse 20 is important. As it stands, the verse is generally understood to mean that the whole circuit of the city wall fell flat, though it does not necessarily convey that idea. The Hebrew words used really mean, "the wall fell under itself," as if a section of the under wall fell in and the upper wall or parapet of bricks sat down on its ruins; or, when the lower wall fell the upper fell on the top of it. Either interpretation would suit the Hebrew words. Here again a wall under another wall or parapet seems to be indicated by the narrative.

In vi. 26 Joshua puts a curse upon the man who should rebuild Jericho, and is made to prophesy that he would lay the foundation on his first-born and on his youngest son set up the gates thereof—meaning that he should make a foundation sacrifice of his eldest, and a completion sacrifice of his youngest son. According to 1 Kings xvi. 34, this actually happened. The walls were rebuilt by Hiel, the Bethelite, in the days of Ahab, King of North Israel. The Old Testament narrative thus implies that Jericho was never refortified till Ahab's reign (c. 900 B.C.), and excavation of the site has revealed that the place, though not fortified,

had been occupied continuously by a village settlement on the ruins for many years after its destruction. With this also the passage 2 Samuel x. 5 agrees, which shows that in David's time Jericho was still occupied, though apparently a place that was not of much account (*cf.* 1 Chron. xix. 5).

In 2 Kings ii. 5, 15 there appears to have been a school of prophets at Jericho. From his healing the waters of the well-known spring beside the ancient Jericho by throwing in salt, the spring has come to be known as Elisha's Fountain (verse 21). The presence of this spring was undoubtedly the reason for the Amorites' choice of the site as a stronghold.

In Joshua xii. 9 the king is included in the list of "smitten kings," and in xviii. 21 Jericho is a town of Benjamin, and 2 Chronicles xxviii. 15 implies that it remained so.

The Old Testament narrative thus implies that Jericho was a fortified town of the Canaanites at the time of Joshua's arrival, was captured and destroyed by him, and never rebuilt till the time of Ahab. From that time it became a place of no great importance, and is seldom referred to.

In Nehemiah iii. 2 the men of Jericho took their place in rebuilding the walls of Jerusalem.

Tell Sultan beside the spring or fountain of Elisha contains the ruins of ancient Jericho, and has been excavated by Sellin and Watzinger. Their discoveries prove that Jericho was an important, though small, Amorite fortress built prior to 2500 B.C. It had been destroyed twice and rebuilt. After the first destruction double brick walls about 30 feet apart were built. These, in turn, were destroyed, probably in the Hittite invasion, and were replaced by a single stone wall, enclosing a larger area, about 2000 B.C. On the top of this wall a parapet of bricks had been built, and this was the wall of Joshua's conquest.

TELL ES-SULTAN—JERICO

The oldest Amorite wall known was discovered at Jericho in circumstances which leave no doubt that it was not only the oldest wall there, but had been built in the Early Bronze Age, prior to 2500 B.C.

This wall was of solid sun-dried brick, and measured 18 feet thick. House ruins of the same period were found between this wall and the walls which took its place. The

bricks of this wall measured 27 by 15 by 4 to 8 inches thick, and were made after Babylonian models. The Amorites thus appear to have been in close touch with Babylonia before they colonised Palestine. Jericho was certainly one of the earliest forts of the Amorites, and guarded one of the two main entrances from the east. Some time prior to 2000 B.C. the city was captured, probably by the Babylonians, and this oldest wall destroyed. The place was again fortified soon after, not later than 2000: and on this occasion an outer and an inner wall were built, both of sun-dried bricks, which still show Babylonian influence, each measuring about 18 by 14 by 4 inches deep. The inner wall was about 12 feet, and the outer about 5 to 6 feet thick, with a space 27 feet wide between the two.

This space was divided into small rooms, measuring 13 by 4½ feet, by partition walls, one running parallel to the city walls along the centre, and cross-walls joining the three. These compartments had been roofed with wooden beams, but whether they formed part of the fortification and ran round the whole city, or what purpose they served, cannot be determined. They may have been stores for corn, grain, and oil, and could have been lighted and entered only by the roof.

These two walls enclosed a smaller city than the oldest solid brick wall. At 2000 B.C. Jericho, in fact, covered an area of only 6½ acres. It may well have been the "Little City" to which Lot begged to be allowed to flee from Sodom (Gen. xix. 20); but, as will be seen, this was no unusual size for an early Amorite fort. Some of them appear to have been little more than magnified barracks for garrisons.

Some time afterwards, somewhere near to 2000, the city was again captured and the walls destroyed, on this occasion by the Hittites. The city was now slightly enlarged to cover an area of about 8½ acres. For the demolition of the double walls, and the removing of the bricks to be reused in the new wall, stairs were built of the bricks, and these stairs were actually found in the city as they had been left.

The new wall was built probably about 1800 B.C., and stood till Jericho was captured by Joshua between 1400 and 1200.

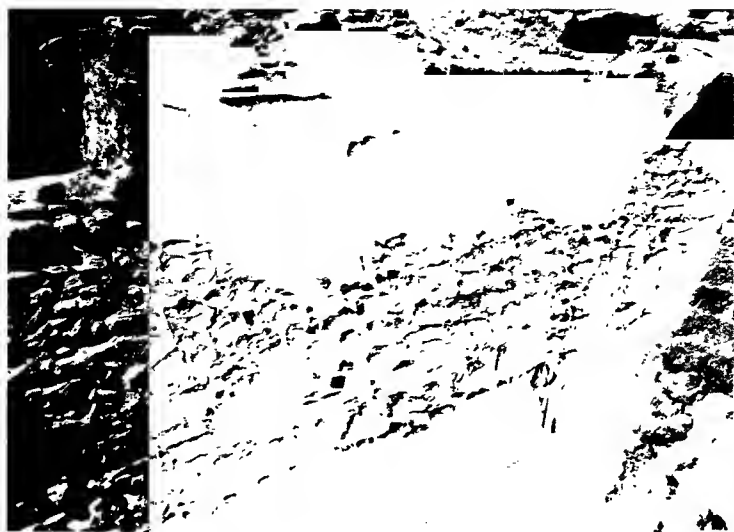
The lower part of this third and latest wall was built of hammer-dressed polygonal blocks, laid in mud-mortar, the



JERICHO—THE DOUBLE WALL PASSING OVER THE OLDEST WALL (1930-31)



TELL SULTAN, THE MOUND OF JERICHO



JERICO—THE STONE WALL, WITH BRICK PARAPET



THE SPRING AND THE FORT INCLOSING IT.

facing p. 121.

interstices being filled with chips or pebbles and mud. This stone section was nearly 15 feet high and 10 feet thick. Above it stood a brick wall or parapet 8 feet high and $6\frac{1}{2}$ feet thick. The bricks were sun-dried, and of various sizes. Some were half-bricks, and where difference of sizes caused gaps, these gaps were filled with half-bricks or lumps of clay. This indicates that the bricks used were taken from the demolished double walls, which accounts for the various sizes. Sun-dried bricks could not easily be removed without breaking them. The remaining bricks of the double walls had been used in building houses, and the stairs leading up to them were left for this purpose.

All three walls rested on a bed or foundation of undressed field stones, laid in mud-mortar on the rock surface. The latest wall must have been the work of the Hittites and Amorites combined, and it would appear that with the conquest of the Amorites by the Hittites came also the use of stone in the building of fortifications.

Stone walls thus make their appearance in Palestine about 2000-1800 B.C., and in later fortifications brick disappears altogether where stone can be procured as easily as brick; but the stones were rudely quarried, and only hammer-dressed. Chisel-dressing does not make its appearance till the Hebrew period, 1000 B.C.

TOWERS

At Jericho the main inner wall of the double walls was strengthened by a large brick tower, 41 feet long and projecting *inwards* about 6 feet, thrust into the wall at the north-west corner. This tower is not bonded to the wall. In its foundation were six corner-stones, smoothly dressed, and other features which point to a later repair about the time of Ahab of Samaria, and this repair may be the work of Hiel (see 1 Kings xvi. 34): but the mere fact that the tower is not bonded to the wall does not justify the inference that it was thrust into it at a later date, though there is little doubt it is a later addition.

About the centre of the west side of the inner wall, the rock surface failed, and a round bastion, 39 feet long and $6\frac{1}{2}$ feet thick, was thrown up to support the foundation. This closely resembles the rounded stair-bastions which we found on the east wall of Jerusalem.

Jericho was thus an important eastern fort from the earliest occupation of the Amorites prior to 2500 B.C. down to the arrival of Joshua. From that time onwards it remained in a state of ruins, with a squatter settlement on the top of them, until Ahab of Samaria decided again to fortify it, and sent Hiel, the Bethelite, to rebuild the walls. 1 Kings xvi. 34 obviously implies that the credit of rebuilding Jericho belongs to Ahab.

STRUCTURE ON THE MOUND BY THE SPRING AT JERICHO

The site of Jericho was undoubtedly chosen for fortification on account of the excellent water-supply from the spring now known as Elisha's Fountain. That the spring should be included and specially fortified is just what we should expect. The remains of a small tower or fort were uncovered by Sellin.

This building is of a military nature, and has been mistakenly assigned to the Hebrew period, since there is no doubt it is much earlier.

The masonry is the usual "Cyclopean" style, common in the Bronze Age, large, polygonal blocks, hammer-dressed only on the outer face, the interstices being filled with small stones. *No mortar* had been used. The walls varied from about 5 to 6 feet in thickness. Similar masonry with no mortar was found at Tel es-Safi (Gath).

It contains two long rectangular chambers, 34 by 12 feet. There is a third of the same size, north of them, divided into two rooms, measuring about 14½ feet long and 12½ feet wide. The north wall of these two rooms is specially strong. There had been another room measuring nearly 16 feet by 11 feet wide. There are traces of other chambers on the north-east side.

According to Sellin, the pottery found in the building is Hebrew ware, and on this account the structure has been dated at 1000-900 B.C. The strength of the walls suggests it was some sort of fort or barrack. As elsewhere noted, the pottery of Jericho has been much post-dated, and the masonry and the absence of mortar, as well as the pottery, belong to an earlier period. There is no doubt that here was an Amorite fort built to secure the water-supply.

The fundamental idea of the structure is a broad building, with entrance on the long side, which is "common to the

Hittites, Egyptians, and Canaanites." The Hebrews followed the same plan—a long room or court, with smaller rooms arranged around it.

This, in fact, seems to have been the general plan of houses in Palestine.

JERICO AND THE OLD TESTAMENT

Not one of these three sets of walls had been laid flat, but the Old Testament account merely states that the wall fell "under itself," and does not necessarily imply that the whole wall of the city fell flat. The south-west corner had certainly been demolished. Joshua ii. 15, which indicates that the wall of Joshua's time was built of two different materials, shows that the third and latest wall built of stone with a brick parapet above it was really the wall attacked and broken down by Joshua. A further confirmation of this identification is the fact that the passage speaks of only one wall all through. Had the two walls been the city walls of Joshua's time the dual form would undoubtedly have been used as in speaking of the double walls of Jerusalem (2 Kings xxv. 4; Isa. xxii. 11). The refortifying of Jericho by Hiel must thus mean that Hiel simply repaired and restored this third wall, which had doubtless been quarried by the squatter settlers between 1200 and 900 B.C. for building materials. As to Joshua's entry, it was found that the south and west sides had been completely broken down and at a later date restored with very rough and hurried masonry. This masonry, as well as the north tower, was probably the work of Hiel. The Old Testament narrative here seems to me to have preserved the accurate facts now restored to us by excavation. This is dealt with fully in *The Accuracy of the Old Testament*, ch. IX, p. 78.

SODOM

During December, 1929, excavations have been carried on by Fr. Alexis Mallon, Jerusalem, on a site in the plain of the Jordan Valley. The peculiarity of this site is that, if ever any mound of ruins existed, it had been completely levelled down, and thus the fact that the spot concealed the remains of an early settlement passed unobserved. It is claimed that this is the site of Sodom. Pottery and other objects found in

it prove that this had been an Amorite settlement of the Early Bronze Age. It had, therefore, been contemporary with Jericho, the oldest walls of which belong to that period. The most important discovery, however, is the fact that the town had been destroyed by a great fire at a very early date and had never again been occupied. It is on these grounds that the place has been identified as Sodom. From the brief newspaper account which I have seen, it appears that this site is north of the Dead Sea and quite near to Jericho, which confirms the idea that both Sodom and Gomorrah were north of the Dead Sea. It seems likely that this will prove to be a correct identification of the site of Sodom, and it fits in well with the incident related in Genesis xix. 20, where Lot begs to be allowed to flee to "the little city." The little city in this case is certainly Jericho.

It is very probable that a similar site, levelled with the plain, in the near vicinity will reveal the ruins of the other town which shared the same fate (Gen. xix. 24-25).

BETHSHEMESH IN THE OLD TESTAMENT

Though Bethshemesh was a Canaanite stronghold from 2000 B.C., there is no record of its capture by the Hebrews in Joshua or Judges. In Joshua xv. 10 it is mentioned as a city of Judah, though not necessarily in the hands of the Hebrews, and in xxi. 16 it is one of the cities given to the Levites. 1 Samuel vi. 9-20 records the bringing back of the ark by the Philistines and their depositing it on "the great stone" (v. 15). This stone is very probably the flat rock surface by the side of the caravan route to Hebron where it passes the town, as Mackenzie suggests; here the narrative would seem to imply that Bethshemesh was a Hebrew city at this time (c. 1100-1050), which is probably correct.

In 1 Kings iv. 9 Bethshemesh is held by Solomon and along with three other towns is governed by the son of Sekar, one of Solomon's twelve governors.

In the time of Amaziah, about 820 B.C., Jehoash and Amaziah "looked one another in the face at Bethshemesh." They fought, and Judah was defeated. Jerusalem was taken by Jehoash, King of Israel, who carried away all the gold and silver treasure and vessels from the King's House, the Temple, and the Treasury (2 Kings xiv. 11; 2 Chron. xxv. 21-23).

About 725, in the reign of Ahaz of Judah, the Philistines captured Bethshemesh and several other towns including Socoh in the south of Judah, and thereafter there is no mention of Bethshemesh in the Old Testament. It is probable, however, that the place was soon recaptured and held by the Hebrews. Thus, according to the Old Testament narratives, Bethshemesh seems to have been retained by the Canaanites and the Philistines until about the reign of Saul or the time of Samuel. This agrees with the results of excavation described below. By the time of David and Solomon Bethshemesh was a Hebrew town, and here again archæology confirms the Old Testament statement. Canaanite and Philistine ware have been found in the ruins of the town dating down to about 1050 B.C. Thereafter in the later strata only Hebrew remains have been found on the site.

BETHSHEMESH—TELL RUMEILAH

Two mounds, separated by the ancient caravan route, constituted the site of the ancient Bethshemesh (Temple of the Sun). One preserves the ancient name and is known today by the Arabic name Ain-shems, or "Well of the Sun." Though it preserves the name, it is the site of quite a recent settlement.

The other is named Tell Rumeilah, and this proved to contain the ruins of the ancient town.

It was an Amorite fort, and covered the small area of 7 acres, about the size of Jericho.

The wall was of the usual Cyclopean type of masonry, already described, and had been built between 2000 and 1600 B.C., so that this is also a fortification built by the Amorites and Hittites combined. The wall is only $7\frac{1}{2}$ to 9 feet thick, and is built several feet in from the edge of the rock on which it rests, because the rock is here of a crumbly nature. The remains of the south gate were found, but the north gate was not uncovered. The walls were traced only by a series of trenches and not laid bare. It may be, therefore, since the site has only been partially excavated, that there was an earlier fortification underneath the walls traced.

Whether these slender walls are the walls of the oldest fort cannot be determined. It does not seem likely, unless we regard the fort as a mere outpost or fortified barrack: but the pottery found certainly points to an early Amorite occupation of at least the II Bronze Age (2000-1600).

From about 1300-1100 B.C. the fort was in the hands of the Philistine grain-growers (*cf.* Gerar). This also is amply borne out by the pottery of these people found on the site. From that time it passed into the hands of the Hebrews, who left it unfortified, after it was destroyed by Sennacherib, about 700.

TOWERS

As in all Amorite forts, the walls were strengthened by towers. At the north-east corner, a rectangular tower, built on the rock surface, was found which measured 30 feet long. It projects 20 feet on the east side and 13 on the west. Altogether it was about 30 feet deep, including the thickness of the wall, and it joined the wall by a straight joint.

The south gate had two towers, the entrance passing straight through between them as in the south gate of Gezer. The western tower had one room with a door giving access to it. In the east tower of this gate there were two rooms, each 10 feet square, with no trace of a door to either. The room in the west tower was larger. These two towers were also rectangular, and projected both outward and inward. They measured each about 20 feet in length of face and 30 feet in depth. Forty yards west of this gate, at the south-west corner, was another similar tower, 30 feet long and about 20 to 24 feet deep, projecting 15 feet on the west side and 10 feet on the east. At another point a buttress was found, over 16 feet in length, but projecting only 30 inches from the wall.

It seems likely that this wall had a series of towers all round it, certainly one at each corner of the fort, but these are the only towers that were traced.

The pottery includes Hyksos, Middle Bronze ware, Mycenaean, Cypriote, Philistine, Early, Middle, and Late Iron Age ware, so that the occupation of the site certainly covers the period from 2000-600 B.C.

Bethshemesh had thus been fortified somewhere near 2000. Traces of conflagration at the south gate show that it had twice been taken by fire and destroyed. The earliest conflagration belongs to the same stratum as the Philistine ware was found in. The city had thus been captured and destroyed by the Philistines about 1300, and several repairs on the wall are attributed to them. The wall of 9 feet thickness must

have been built by them from the materials of the earlier Canaanite wall.

There appears to be no evidence to show how it passed into the hands of the Hebrews, but the pottery leaves no doubt that they occupied it from the time of David and Solomon.

The next burnt stratum lay just under the Arab stratum, and the pottery in it shows that it had occurred in late pre-Exilic times. This burning must represent the siege and destruction of Bethshemesh by Sennacherib (2 Kings xviii. 13) about 700 B.C.

From that time the place had been left unfortified, but it was again occupied by the Hebrews in late pre-Exilic (after 600) or early post-Exilic times, as the pottery proves.

It is noteworthy that in the Hebrew brick-built houses of the site the bricks measured 20 by 15 by 4 inches. These must have been taken from a still earlier Amorite brick fortification, of the same period as the double walls of Jericho, the early wall of Lachish, etc., where bricks of similar size were found showing Babylonian influence. There is, therefore, ground for presuming that there was an Amorite fortification on the site belonging to the Early Bronze Age, and that the stone wall is not the earliest fortification of Bethshemesh.

The excavation of Bethshemesh was resumed in 1928-29 by the Haverford Expedition, under Professor Elihu Grant, and his results confirm the conclusions stated above,¹ and add a few more details. He found the same three main strata, Canaanite, Philistine, and Hebrew. Of the pottery which he found in cave tombs or rock-cut tombs, and in the city area, the earliest which I have seen published is Hyksos—viz., the well-known small squat cylindrical jug with double strand handle and a well-known Hyksos type of water pot. These may date as early as 2200 B.C. They prove that the earliest occupation of Bethshemesh belongs to the Hyksos period. Mycenaean and Cypriote ware, along with Egyptian scarabs and amulets, are the outstanding features of the period sixteenth to fourteenth century; and for the fourteenth century Philistine ware makes its appearance, followed by the Hebrew from about 1100-600 B.C. The history of the occupation of the site as described by Mackenzie is thus confirmed on all the main points.

Where Professor Grant struck the city wall, he found it had

¹ See *P.E.F. Quarterly Statement*, October, 1929, p. 201.

been reinforced by a weaker outer wall of the late III Bronze or Philistine period, and, as the interior level of the city rose, slender walls or parapets had been built on the top of the main wall. The original Canaanite wall was thus in use throughout the whole period of occupation.

At least one burial cave was found underneath the foundations of the wall, and this burial must antedate the building of the wall, but there is no record published of the contents (if any) of this cave, and nothing definite can be inferred from it.

Tombs were found both inside and outside of the walls. One just outside the wall under the sloping debris was a straight rock-pit containing successive layers of burials and deposits. Bowls, lamps, vases, and jars were found, of which the earliest shown in the illustrations are a Cypriote pilgrim flask and Mycenaean ware (Tomb 1). Tomb 2, a cave burial, contained Hyksos ware, XVIII Dynasty ware (sixteenth century), and Cypriote vases (bibilis) of about 1400 B.C. The bodies were laid in contracted position.

HIGH PLACE AND TEMPLE OF BETHSHEMESH (1929)

In a section which was "somewhat clearer of dwellings" was found a collection of standing-stones, one of which was 5 feet in length and tapered in shape like a torpedo. Quite near to it was a socket-stone cut to fit the end of the pillar. This definitely decides the purpose of the socket-stone (altar?) found beside the pillars at Gezer.

Obviously this had been the Canaanite high place, and near to the pillars was found a circular slab, "grooved and pitted for the sacrifice of animal offerings."

A little to the north of the pillars were found the ruins of the Canaanite temple structure composed of large polygonal blocks. On a high level were found two rows of column bases running E. to W., and on a lower level a similar double row. The lower set had belonged to the earlier structure. The temple appears to have been entered from the west side, its front wall being about 43 feet and its south wall 56 feet in length. The walls were 5 feet thick. In the upper debris of this enclosure a head of Astarte and the stem of a stand-bowl (incense-burner?) were found. The later structure seems thus to have been a temple of Astarte. A complete Astarte plaque

and fragments of three other figurines were found in the city debris. Professor Grant thinks serpent-worship may also have been known in Bethshemesh, unless the representations of the serpent were purely decorative. There had thus been a temple of Astarte built in the II or III Bronze Age, and afterwards restored and extended by the Philistines.

Scarabs of steatite, serpentine, paste, crystal, amethyst, and carnelian were found, and one jar-handle inscribed in early Hebrew was picked up on the surface. This is described as having a two-line inscription, but there is no mention of any figure between the lines, so that we cannot say to what type it belongs.

GATH¹: TELL-ES-SAFI

The ruins on this mound cover the period from about 2000-300 B.C. It has been identified with Gath. The Canaanite fort covered an area of 16 acres, and had been built about 2000. The masonry is of stone in the usual Cyclopean style, with the noteworthy exception that *no mortar* had been used, as at Jericho.

Unless a wall is pulled to pieces, however, where mud-mortar was used it is never easy to decide whether the stones had been laid in mortar or not. In the early walls of Ophel we often felt doubtful whether mud-mortar had been used or not.

Gath figures in the period of Rehoboam, and is discussed in the Hebrew section.

*Tell-*ej-Judeideh**—Socoh or Azekah—five miles north of Beit Jibrin, contains the remains of another Canaanite fort, which has not been identified definitely. The pottery shows that it had been occupied from about 2000 to about 1600 B.C. At that time it was destroyed, perhaps by an XVIII Dynasty King of Egypt, and it was never again occupied till early Hebrew times.

It must, therefore, be one of the forts rebuilt by Solomon or Rehoboam, in Southern Judea, such as Socoh or Azekah (2 Chron. xi. 5-10).

The excavation did not reach the city walls.

Whatever Old Testament site this Tell represents, there is no doubt that it formed one of the middle line of southern

¹ For Gath in the Old Testament, see Ch. IV. p. 213 *seq.*

defences. Azekah is usually located close to Gath, and Socoh a few miles south of that. As it seems to have been fortified by the Amorites at the same period as Gath, the identification with Socoh or Azekah is very probably correct.

At *Tell Zakariyeh*, which has been identified as Socoh or Azekah (Josh. x. 10, 11, 15-25), there had been a Canaanite fort of the period 1600-1200 B.C. This had been destroyed, and later it was rebuilt by Rehoboam. It is described under Hebrew Forts. If Tell Judeideh was Azekah, this Tell probably contains the ruins of the fort Socoh.

AZEKAH AND SOCOH IN THE OLD TESTAMENT

In Joshua x. 10, 11 Azekah is reached by the way that leads to Beth-horon: and in xv. 35 both are named as cities of Judah. The Philistines pitched between the two towns in Samuel's time (1 Sam. xvii. 1) and in Nehemiah xi. 30 Azekah is near to Lachish. Socoh is mentioned as being governed by one of Solomon's twelve governors (1 Kings iv. 10), and in 2 Chronicles xxviii. 18 it was taken by the Philistines when they took Bethshemesh in the reign of Ahaz (725 B.C.). Socoh is one of the towns whose name appears on Royal Jar stamps (see Inscriptions).

LACHISH—EARLIER REFERENCES IN OLD TESTAMENT

Joshua found Lachish a Canaanite stronghold under an Amorite governor, Japhia, one of the four Amorite governors who united with Adonizedek of Jerusalem and were defeated and slain by Joshua at Gibeon. Thereafter he laid siege to Lachish itself and captured it (Josh. x. 3, 23, 33-35). In xii. 11 its king is in the list of "smitten kings," and in xv. 39 the city is given to Judah. The Old Testament references of the period of the Hebrew kings are discussed under the Hebrew Conquest.

LACHISH—TELL-EL-HESY

The earliest walls in the mound Tell-el-Hesy enclose an area of 440 yards square, or about 40 acres. It is the largest Amorite fort known so far.

The wall is a "Millo" or "filling" wall. The outer and

inner faces are built of sun-dried bricks, measuring roughly 23 by 13 by 4 inches thick. The size of these bricks suggests Babylonian influence, and they are much the same as those found at Bethshemesh, Jericho, Megiddo, and Ta'anach. As at Megiddo, these bricks were plentifully mixed with chopped straw.

The presence of these bricks alone would suggest that this is one of the very earliest Amorite forts, and belongs to the Early Bronze Age, prior to 2000 B.C. The pottery, and especially the potters' marks on pottery, seem to me to confirm this dating. Petrie and Bliss erred on the safe side in assigning it by the stratification and depth of debris alone to about 1700: but Petrie now admits a considerable error of 150 years in dating. Even this admission, however, is too little. Some of the pottery found is undoubtedly Early Bronze ware. We are quite safe in assuming that Lachish was fortified by the Amorites before 2000.

The wall measures 35 feet thick at the base and had been 20 to 16 feet thick at the top. It rests on the native soil of the natural mound. The bricks are laid in courses of headers and stretchers alternately. The massiveness of the wall itself favours a date as early as 2500-2000 B.C.

TOWER

A tower was found on the north side, measuring 56 feet in length with a projection of 12 feet, about the same size as the Tower of David on Ophel. In this tower were two compartments of the usual dimensions, 10 feet square, and surrounded by walls 10 feet thick. No trace of doors was found in these compartments.

Lachish was held by the Canaanites down to the time of Joshua, between 1400 and 1200 B.C. Then it was destroyed, and the Israelites settled on it. It remained unfortified, however, till the time of Rehoboam (2 Chron. xi. 9).

Outside of this early fortification, on the west side, Petrie found accumulated debris varying from 1 to 10 feet deep. In this debris only Early Bronze Age pottery was found, and remains of brick walls. This indicates a brief occupation, but proves that there had certainly been an Amorite occupation earlier than the walls above described. The above wall perhaps incorporated part of it (*T. H.*, p. 31, § 27).

Altogether eight cities were found in the 60 feet of debris on the top of this mound. Cities I-IV, on the lowest section, represent the Canaanite or Amorite occupation.

City III had apparently been held by the XVIII Dynasty of Egypt, between 1600 and 1400 B.C. The city had then been destroyed, and on its ruins is a layer of ashes, 5 feet deep, as if the site had been used by alkali burners. This destruction would date about 1500.¹ The place must have remained unoccupied for a considerable period at this stage: but the walls remained standing, and had been repaired, since it was again occupied as City IV. The wall of City IV must be the

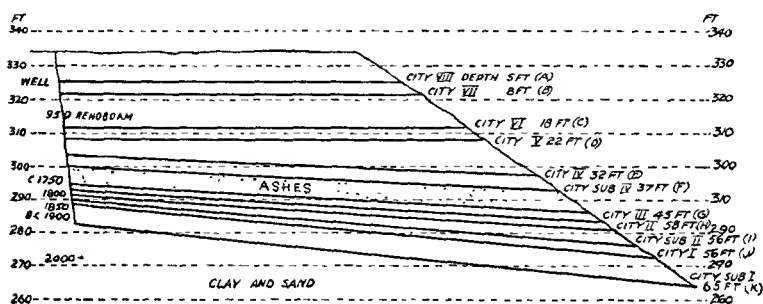


FIG. 16.—LACHISH: LEVELS OF CITY BASES.

wall of Joshua's time. The strata at this point, according to Petrie, show a period of nomad or squatter occupation, succeeded by City V, which, however, was not fortified.

Rehoboam fortified City VI at about 950 B.C. It is quite clear that the lowest strata of the mound represent a much longer period than Petrie and Bliss allowed. The difficulty about an early date for City III is, that in this stratum a cuneiform tablet was found,² which has been classed with the Tell-el-Amarna Tablets, and assigned to the period of Egyptian occupation of the XVIII Dynasty. City III, in this case, cannot be earlier than 1600 B.C., and had been destroyed by 1450. No trace of occupation later than 450 was found on the mound.

The eight cities and sub-cities, which may themselves represent a long period of occupation, may be dated as follows:

¹ In the invasion of the XVIII Dynasty Kings of Egypt after the expulsion of the Hyksos, 1587 B.C.

² The depth at which this tablet was found may be fortuitous, but XVIII Dynasty scarabs were found on the same level.

City VIII	..	..	550-450 B.C.
„ VII	..	..	650 B.C.
„ VI	..	..	950 B.C.
„ V	..	..	1100 B.C.
„ IV	..	..	1400 B.C.
Sub. IV	..	..	1500 B.C.
City III	..	..	1600 B.C.
„ II	..	..	1700 B.C.
Sub. II	..	..	1800 B.C.
City I	..	..	1950 B.C.
Sub. I	..	..	2000 B.C.

TELL-BEIT-MIRSIM. KIRJATH-SEPHER¹*Kirjath-Sepher in the Old Testament*

According to Joshua xv. 15-20 this was the older name of the place which was later known as Debir. In that passage is described the capture of the stronghold by Othniel, who received Achsah, the daughter of Caleb, to wife as his reward. The same incident is described also in Judges i. 11-15. These are the only two references in the Old Testament. The name Kirjath-Sepher is generally taken to mean "City of the book," but no explanation has yet been discovered. Welch (*H.D.B.*) seems to regard the root "Sepher" as foreign to Hebrew, but gives no reason.

The original meaning of the word Gesenius gives as "scratch, scrape or polish," and from this it came to mean "inscribe, write." In modern Hebrew the original meaning is preserved, and it is used in the sense of "cut." Above a hair-dresser's door may be seen the words "šāppār wagāllāh," which means "hair-cutting and shaving." Sephar (*Gen.* x. 30) and Sepharvaim (*2 Kings* xvii. 24) are the same root, and probably the meaning "cut or scrape" contains the origin of the name.

Tell-Beit-Mirsim has been identified as the ruins of Kirjath-Sepher, and excavation has proved that it was continuously occupied from 2200-600 B.C. and was an important place in the time of the Hebrew kings. It is curious that there is no reference to it in the Old Testament narrative after its capture by Othniel. The earliest strata show abundant evidence of occupation by the Hyksos.

¹ *P.E.F. Quarterly Statement*, October, 1926, p. 209.

The city wall had been 40 feet high and 14 feet thick. The early fortress covered an area of $7\frac{1}{2}$ acres.

The "defences include the use of concrete in a system of casemates," which served not only as stores for the garrison but also as traps for an enemy who had scaled the walls. The excavations cover the period between the capture of the town by Joshua down to its destruction by Sennacherib in 701 B.C.

Many Hebrew remains, including a "factory system" of dye-works, abundance of weapons, sickles, pottery and inscribed sherds, were found in the ruins, as well as a small incense-altar of the "early iron period," about 1100 B.C.

These casemates may explain the purpose of the compartments between the double walls of Jericho. They seem to be much alike.

Altogether six strata and six successive cities have been found in this mound, each separated from the other by burnt levels which indicate that the fort had occupied an important position and had suffered destruction at close intervals.

The sixth or lowest stratum has not been excavated yet, but it must belong to the period about 2200-2000 B.C. The pottery in the fifth stratum is II Bronze Age ware, and includes Hyksos types, so that the *second earliest city* must belong to the period about 2000. *The third city* in the fourth stratum also contained Hyksos pottery and seven scarabs of the Hyksos period, so that there can be no long interval between this city and the preceding. It was probably destroyed about 1600 B.C. by the XVIII Dynasty invasion from Egypt.

The fourth city in the third stratum contained Canaanite painted ware of the III Bronze Age, but "not a scrap of Philistine ware." It must, therefore, date between 1500 and 1300.

The fifth city in the second stratum had been very hastily and badly constructed, and for this reason has been regarded as the Hebrew city built by Othniel (Judg. i. 13) after he captured and destroyed the place.

Here iron sickles and ploughshares were found, and alongside of them quantities of Philistine pottery. The presence of the Philistines here accords with the fact stated in the Old Testament that Israel was subject to the Philistines in the time of Samson and Samuel, about 1100 B.C. The Old Testament narrative implies that the Philistines began to "oppress" Israel first at that time, and excavation here appears to confirm the accuracy of the Old Testament statement. The Philistines

had prior to that date confined their attention to the maritime and southern plains, leaving the hill-country alone.

The uppermost stratum contained the remains of the sixth and last town on the site. This town dates from about 900-600 B.C. A seal found bore the inscription, "Eliakim, Servant of Jehoiachim," showing that the town was still in existence in Jehoiachim's reign, about 597. It was probably destroyed in that year by Nebuchadnezzar, or in the great catastrophe of the years 588-586.

Of this Hebrew occupation (900-600 B.C.) many relics were found. Children's toys, figurines, rattles, whistles, carved stone palettes for grinding malachite or antimony to darken the face around the eyes, Astarte pedestal figurines, jar-handles with the stamp "To the King: Hebron," are among the smaller finds, illustrative of the life of the period.

In the third city was found a limestone stele of the Serpent Goddess, which is described under Religion.

Ivory inlaid objects, bronze weapons, jewellery, vessels in alabaster and glaze were also found in this city, dating about 1700 B.C.

The fact that a jar-handle was stamped "To the King: Hebron" seems to prove that Hebron was the Revenue centre for the district, and that Kirjath-sepher paid its taxes to Hebron, from which town the jars of wine and oil were remitted to Jerusalem.

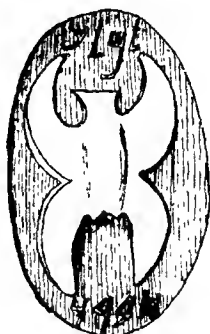


FIG. 17.—JAR-HANDLE
STAMP—"TO THE
KING: HEBRON."

GERAR IN THE OLD TESTAMENT

In Genesis x. 19 Gerar is mentioned as a Canaanite town, and in Genesis xx. and xxvi. Abraham and Isaac went down to Gerar in time of famine. During a previous famine Abraham went to Egypt (Gen. xii.), but on this second occasion he finds food for his cattle at Gerar.

Tell Jemmeh, a short distance south of Gaza, has been identified as the site of Gerar, and excavation there has shown that in the Hyksos period (2000-1200) Gerar had become a grain-growing centre. In this probably lies the explanation of why Abraham found it unnecessary to go to Egypt for fodder during the second famine. Gerar had sprung up as

a grain centre and a sure supply, so that the Old Testament narrative implies, without specifically mentioning it, a fact which has been proved by excavation to be correct. Isaac's visit in chap. xxvi. has generally been regarded as a duplicate of the narrative of Abraham's visit in chap. xx., in spite of the fact that the writer in verse 1 specially mentions that the occasion of Isaac's visit was a different famine. The difficulty apparently lay in the fact that "Abimelech" was still "King" of Gerar. Abimelech, however, means "The king is my father," and is simply the Hebrew form of the title given to the governor of the place, as we should speak of the King's Commissioner, and every governor of Gerar could naturally be described by the title. "The Rabshakeh" of 2 Kings xviii. is another example.

About 1300-1200 Gerar fell into the hands of the Philistines and became a still more important grain-growing centre. The Philistines are now regarded as of Cretan origin, and were grain-growers, who exported the grain to Crete, which was unable to grow enough for its population.

The only other mention of Gerar in the Old Testament seems to be 2 Chronicles xiv. 13, where Asa pursued the Ethiopians as far as Gerar.

Pottery of the early Canaanite and Philistine periods was found in the ruins, but Hebrew pottery was also found, although there is no mention in the Old Testament of its being occupied by the Hebrews. From 1000-600 B.C. the place was held by Solomon and his successors.

It should be noted that in Genesis xxi. 32 Gerar in the time of Abraham is described as in the land of the Philistines, it being implied that Abimelech was "King" of the Philistines. This is perhaps an anachronism, since, so far as excavation has revealed, the Philistines do not appear in Palestine till about 1300, considerably later than the period of Abraham, though it may ultimately prove that the Old Testament narrative is correct, and that the Philistine grain-growers occupied parts of Palestine at an earlier date (on this see below, p. 142, and Petrie, *Gerar*, p. 28).

GERAR: TELL JEMMEH

From the various dating materials and the depth of 20 feet debris below the Thothmes III (1500 B.C.) level, Petrie calculates that the earliest settlement on this mound dates as early

as 2600, or perhaps 3400 B.C., and the most frequent use of flint sickles, judged by the numbers found in the various strata, begins about 2000 in the Hyksos period.

At 1500 B.C. the houses of the XVIII Dynasty town were built of brick plastered with yellow clay to keep off rain. The brickwork is greatly worn. The corners rested on a single undressed block of limestone. The three lamp and bowl deposits of this town are spoken of elsewhere.

No town walls of early date were disclosed so far, but there is little doubt that this had been an early Amorite settlement with walls of sun-dried brick. Petrie's computation of the fourth millennium as the probable date of the earliest settlement strengthens my contention that the Amorites occupied Palestine at that early period.

The town of Gerar of the XX Dynasty (1200-1100) had been burned in various parts at the level 184-185 feet, which dates between 1200 and 1300.

Petrie attributes this burning to its capture by the Philistines about that time.

THE XXII DYNASTY TOWN, 952-749 B.C. (SHISHAK).

The town of this period is well defined all over the site and easily traceable because the buildings were of bricks with foundations laid on clean sand, as was found also at Lachish. One large building consisting of three chambers with a forecourt¹ seems to have been a sanctuary, but no cult objects were found in it. The forecourt was paved with a bed of gravel.

The finest piece of building (EC-ED on Pl. 9) had six courses of bricks laid on a sand foundation, and plastered all over above ground. Under the northern corner (EC), pits had been made for foundation deposits, but nothing except sand had ever been placed in them. Of these pits the northern was 46 and the southern 36 inches wide.

On the west of the sanctuary building were the iron furnaces, which were probably of earlier date than this town, but later than the XX Dynasty town. They date from 1175-870. The earliest is the largest and best preserved. It has the draught-hole complete, shown in elevation on the plan at the end of the furnace. All the furnaces have recesses at the sides, sloping wider as they ascend. The earliest is almost as old "as any

¹ Gerar, Plate IX, ET-EY.

dated iron known in the Mediterranean," excepting the knives found here dating 1300 and 1250. They prove that the iron used was smelted in Gerar itself, and not imported, and corroborate the statement of the Old Testament that the Philistines were smiths and compelled the Israelites to come to them for all their iron work (1 Sam. xiii. 5, 19).

This town, which covers the period from Rehoboam to Jotham or Ahaz, was in parts completely destroyed by the sinking of large granaries in the Persian period to a depth of 18 feet below the ground level of that period.

THE TOWN OF AMAZIAH—c. 820 B.C.

In the next town the main buildings of the previous town are continued, though portions that had been used for refuse heaps inside the city were now cleared and covered with buildings. The large building of Shishak¹ (970 B.C.) continues through this period as well as the next. In an old grain-pit just north of this building and on this level was found a pile of Assyrian potsherds. The building had been the residence of the Assyrian governor, and somewhere between 681 and 669 B.C. these grain-pits had been the ash-pits of the residency. The building is not complete on the plan, but it appears to resemble closely the residencies with treasury attached, which we describe further on. A scarab of Shesha, the Hyksos king, was also found in this stratum. It had been reused, as were also others found. The appearance of rubble walls in parts suggests that bricks were not so familiar to the occupants of this period as to the Egyptians.

THE XXVI DYNASTY FORT AND PALACE

The town of the next period (XXVI Dynasty, 664-525 B.C.) is naturally in the best preservation, having less weight upon it. The outstanding features are the palace and the citadel or fort beside it. The fort is a great oblong like those at Daphnæ and Naukratis. It measures about 120 feet N. to S., and 90 feet E. to W. These forts were great solid masses of brickwork, containing granaries, and strong enough to support the buildings on the surface platform. The granary of Shaghanba (Pits of Joseph), measuring 75 feet square, is of the

¹ Marked EG on Plate 9, and DR on Plate 10 of *Gerar*.

same type. Solid as was this brickwork of the Gerar fort, however, the Persians cut right down through it and sunk their grain-pits into its walls, so that about 455 B.C. the fort had been largely destroyed. In the centre there had been an

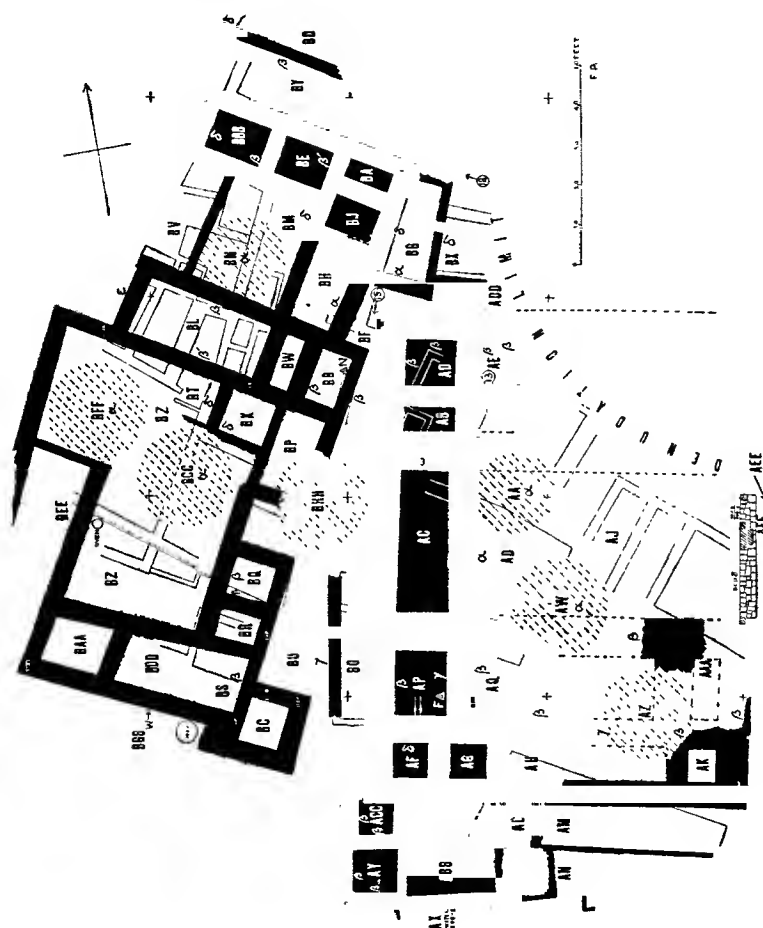


FIG. 18.—PLAN OF GERAR.

unroofed court 35 feet wide, with chambers running along its N.W. side, but none on the S.E.

In the search for foundation deposits, at the south corner of the fort there was found a small model of a corn-grinder with the leg-bones of a calf beside it. As these objects are char-

acteristic of Egyptian deposits, it is quite clear that the fort is of Egyptian origin. The Canaanite deposited a lamp and bowl, and the Assyrian placed inscribed cylinders under corners as foundation deposits, so that neither of those can be the builder of this fort. At the S.W. corner side-chambers had been added, and just south of these was a rubbish pit containing a great quantity of potsherds.

To the N.W. of the fort and adjacent to it is another large building of the same period. Additions had been made to the main building at the S.E. corner (BC on plan), a wing on the N.E. (BH to BA), and a further addition between that wing and the fort (BG, BX), but all three additions are of the same period as the original building, as the bricks show. This building had been the governor's residence or palace. The fine brickwork is shown on the photograph (Pl. 12, 5) of the small chamber AB.

In several walls of this period blocks of stone were let into the corners at a height of 3 to 5 feet above the ground to prevent loaded animals knocking away the brickwork, just as gateways were sometimes lined with limestone slabs for the same purpose. These buildings had been the palace and fort of Psamtek I of the XXVI Dynasty (664-610).

In the Persian period (525-405) there was no longer any need to fortify against Egypt in the south of Palestine, and the chief necessity was store-supplies on the route to Egypt. The fort of Psamtek was practically demolished by the sinking of large granaries into its walls. These circular store chambers were not of bricks, but made by "piling layers of rammed clay about 4 inches thick" between boards placed to preserve the uniform thickness, exactly as we should build a slender wall of cement concrete. The walls were all denuded to a height of only 8 or 10 inches. Ten of these great granaries were found inside the city, but the number found probably represents only half of the original. In one lay a heap of grain carbonised. They were not dome-shaped but conical, the roof rising to a blunted point as reconstructed on Gerar, Pl. 14, 2.

This shape was used in Assyria and must be regarded as of Mesopotamian origin. In two of the larger pits were found two steps in the face of the wall, showing that a winding flight of steps had led up to the top. Petrie calculates from the storing capacity of the reconstructed pit that each pit would

contain grain enough to support 2,360 men for two months. The original number would thus have been sufficient to support 70,000 men for a two months' campaign against Egypt.

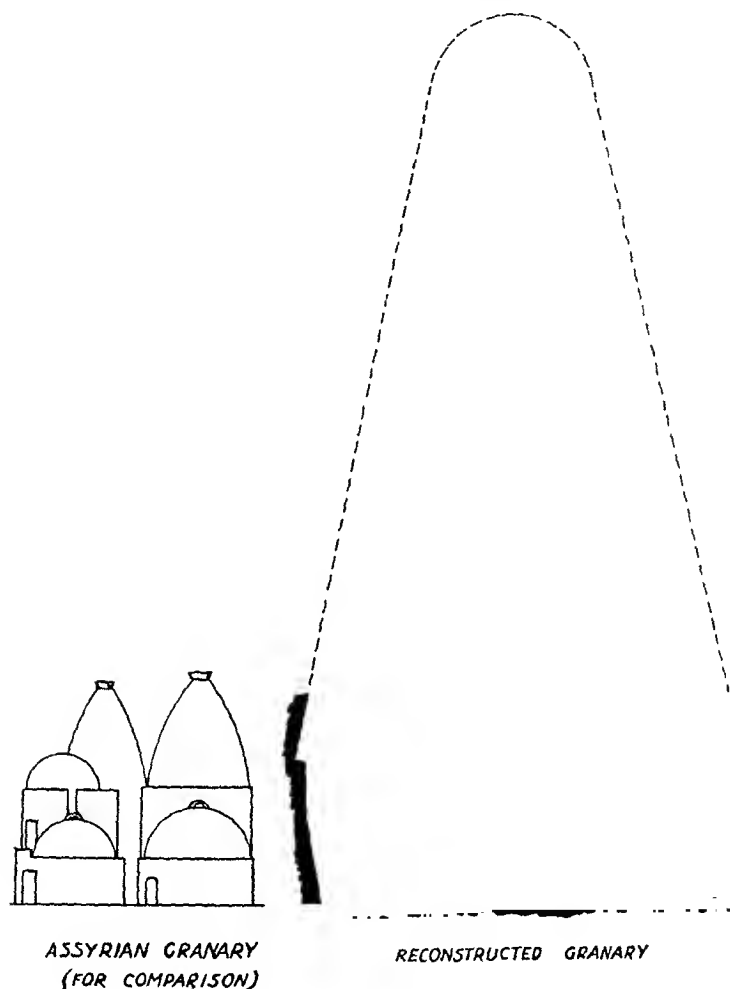


FIG. 19.

City Walls.—Close to the two circular granaries on the western ridge of the mound two lines of glacis were found, one inside the other, and over 20 feet apart. These are the remains

of two successive fortification walls. Under the foundation of the outer glacis lay a bed of ashes. These ashes belonged to the 184-foot level, dating thirteenth to twelfth century, and are therefore part of the destruction of the city by the Philistines at that period. The inner glacis is therefore part of the early Canaanite wall. The outer glacis belongs to the later fortification in the reign of Amaziah.¹

Philistine Sword Furnaces.—Just north of these west granaries were the remains of a house of the same level and date (c. 1200),¹ as proved by the pottery in the large N.W. room. To the south of this room is a flight of steps of the same period. The steps end at a long narrow space, which had been a cupboard underneath wooden stairs ascending eastwards. The upper wooden portion of the staircase has vanished. Due south of this had been a sword furnace. It consisted of a small cubical furnace with a long trough-shaped flue leading to the top of the steps that remain. Another similar furnace with flue was found in another section of the excavation. The flues show signs of violent heat, and by their size these had been used to heat bars of iron about 3 feet in length. These can only have been used for sword-making and tempering, and as they belong to that period may safely be regarded as some of the furnaces used by the Philistines, to which the Hebrews had to bring their implements to be sharpened and relaid.

GERAR AND THE OLD TESTAMENT NARRATIVE

The discoveries at Gerar show several valuable points of contact with, and confirmation of, the Old Testament narratives. It has been already mentioned that Gerar had been a grain-growing centre from a very early date, 2000 B.C. if not earlier. At about 1200 B.C. the Philistines were the representatives of the Cretans in that region, growing grain and sending it home to Crete. Abimelech was merely the Hebrew form of the title given to the corn-factor or Cretan governor stationed in the town. The Cretans traded with Egypt during the I Dynasty and must have known Palestine then. The grain-growing at Gerar and elsewhere in Palestine may therefore quite well have started at that very early date, the Philistines being their representatives when the Hebrews arrived. The passage Genesis xxi. 32 may thus embody the actual fact.

¹ See *Gerar* (Petrie), Pl. 13.



GEOPARK TELL CANAANITE, PHILISTINE AND HEBREW POTTERY
 1 2 3 4 5 HEBREW

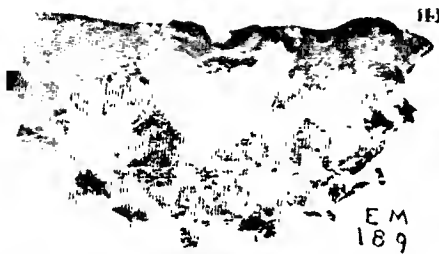
PLATE 100 HEBREW CERAMICS (Geopark Tell Canaanite)

Geopark p. 142.

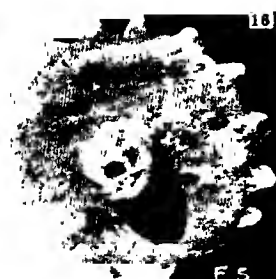
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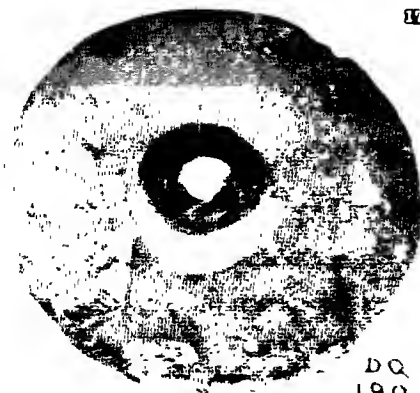


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GERAR POTTERY MODELS OF CHARIOTS AND CHARIOT WHEELS

HELLENIC PERIOD 1000-800

Cretan representatives may quite well have occupied Gerar and the district around in the time of Abraham.

According to Joshua xiii. 2-3 the Philistines were limited to five cities in the south, Gaza, Ashdod, Askalon, Gath, and Ekron, which Joshua left unconquered. At 1150-1200, therefore, this was the extent of their possessions; but at 1030 they are in the Jordan Valley and in the north on the Plain of Esdraelon, at Gilboa, and Bethshan. Excavation at Bethshan has proved that this is correct. The writer of Joshua was not aware of the latter fact; otherwise, if he wrote as late as even 900-800 B.C., he would have included the northern Philistines as having been encountered or subdued by Joshua. The fact that he does not indicate that the original document of Joshua was written prior to 1030 B.C. According to results at Gerar, as shown by the replacing of the Mycenaean ware by the painted spiral decorated ware of the Philistines, the earliest appearance of the Philistines in Palestine dates in the thirteenth century B.C. At 1194 Rameses III repelled them. At 1150 they were limited to the above five cities. Between 1070 and 1030 they were attacking the Hebrews. At 1030 they held or captured Bethshan after the battle of Gilboa, and about 1000 B.C. they were conquered by David, though as we saw under Gath the conflict between the Hebrews and Philistines continued intermittently after that.

Iron.—The use of iron is frequently referred to in the early narratives of the Old Testament, as if it were being wrought at the period referred to. The Philistines are spoken of as smiths (1 Sam. xiii. and xiv.), and chariots of iron are mentioned (*e.g.*, Josh. xvii. 16) at Megiddo, in the south (Judg. i. 19), of Jabin (Judg. iv. 7), and Og, King of Bashan, is credited with having a bedstead of iron (Deut. iii. 11). All these passages refer to the thirteenth to the twelfth century B.C., and as 1000 B.C. has been regarded as the beginning of the Iron Age in Palestine these passages have been treated as anachronisms and assigned to a date after 1000.

Excavation at Gerar has, however, proved that iron was wrought as early as 1300 B.C., so that these passages are perfectly correct, and may have been written contemporarily with the events recorded, so far as iron is concerned.

Gold.—In Judges viii. 21-26 it is recorded that after the defeat of the Midianites, who "were Ishmaelites and therefore wore ear-rings of gold," Gideon collected the spoil. He

obtained ear-rings to the weight of 1700 shekels, about 31 pounds of gold; but in addition he collected also all the "ornaments" (*sakhāronim*—*i.e.*, crescents or crescent-pendants), "collars" (*netīphōth*—*i.e.*, pendants), besides the "chains" (*anāqōth*—*i.e.*, necklaces) that were round the camels' necks. All these were probably also of gold, or perhaps of silver covered with gold leaf.

This incident happened about 1140 B.C. Curiously enough all the gold found at Gerar, excepting only one gold ear-ring found in a different level, was found in four different deposits belonging to this same period. These had been hidden away for safety, and consisted mainly of gold ear-rings. It is very likely that the Midianites had stolen these from the Philistines of Gerar, or *vice versa*. It is, at least, striking to find that the only gold period in Gerar coincides with the Gideon incident, and specially that ear-rings predominate so largely. Each ear-ring from Gerar weighs half a shekel. Two would weigh a shekel. The 1,700 shekels therefore consisted of 1,700 pairs of ear-rings taken from 1,700 Midianites slain in the fight. The Judges narrative thus preserves the knowledge of a gold period, which has been confirmed also by excavation.

Chariots.—Pottery models of box-shaped chariots with wheels both smooth and spiked were found at Gerar of the period 970-900 B.C., the time of Shishak's invasion. These are quite familiar in Assyria, but are equally common at Anau in Turkestan, very much further east. At Anau they have been dated by some at 2000 and others at 1000 B.C. The Gerar chariots are later, and have probably come in from Assyria. They seem to be models of wooden box chariots with solid wooden wheels, which had been shod with iron. The spiked wheels were manifestly invented to secure a better grip and easier pull on loose sandy surfaces. They may be the type of chariots of iron referred to in the Old Testament.

BETHPELET—TELL FARA

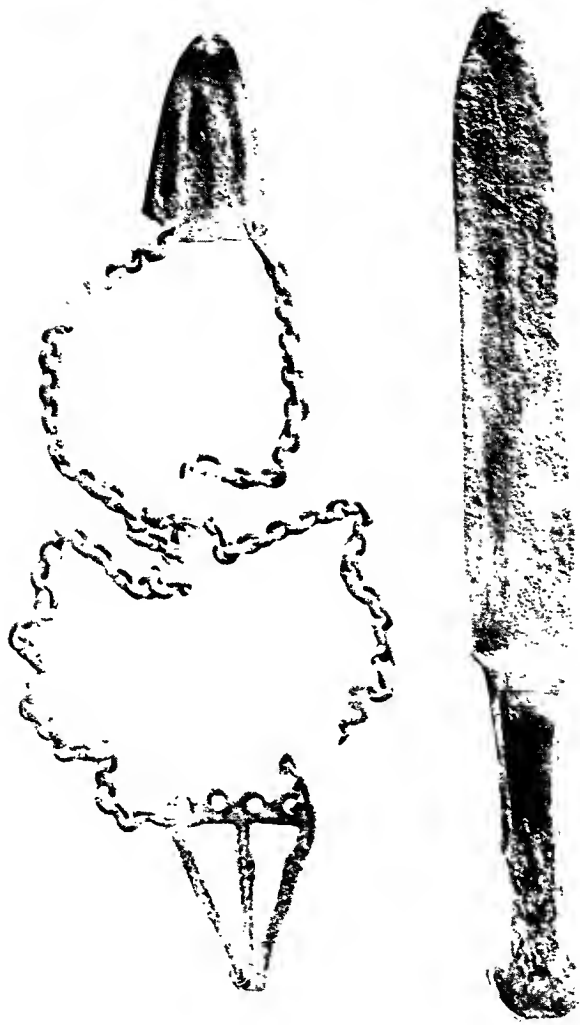
The mound Tell Fara lies nine miles due south of Tell Jemmeh (Gerar), which is due south of Gaza. It stands by the only open stream on the way to Egypt, exactly the sort of natural mound and conditions which the Canaanites would choose for a fort, isolated as it is on three sides by ravines, and commanding a water-supply. The mound is 150 feet



TELL EL HESI MOUND OF LACHISH



GERAR—SWORD TURNACE
CANAANITE FORTIFICATIONS



CANAANITE FORTIFICATIONS
BETHPELET—DAGGER WITH INLaid IVORY HANDLE AND CHAIN ATTACHMENT FOR SHEATH

high, the town debris on the top being 20 feet deep, and this debris carries the history of its occupation back to before the XVIII Dynasty (1600).

Its geographical position suggests that this is the site of Bethpelet. The word Fara is the Arabic equivalent of the Hebrew word Pelet. Both words mean "escape." Bethpelet was the "place of escape" from desert life and from drought, and the original name has clung to the mound down to modern days. In Joshua (xv. 21-36) Bethpelet is one of the "utmost cities of Judah" taken over from the Canaanites. It seems always to have retained its importance as a southern defence.

Two of David's thirty leaders, Helez and Ahiyah (1 Chron. xi. 27, 36), came from there, and the first named was one of David's twelve generals (1 Chron. xxvii. 10). After the return from captivity in Babylon "Beth-phelet" is named as one of the nine towns reoccupied in the south (Neh. xi. 25, 30).

The mound has not yet been completely excavated, but the cemetery has yielded results of great importance. Two dozen Hyksos tombs have been found containing not only Hyksos pottery, but a series of scarabs showing the same features of degeneration as the collection found at Tell el-Yahudiyeh (Avaris) exhibited. The scarabs in Petrie's opinion prove that Dynasties XV-XVI were Hyksos Dynasties, and ran contemporaneously with Dynasties XIII, XIV, and XVII of the Southern Kings of Egypt. The pottery, taken together with these scarabs, leaves no doubt that the Hyksos were the paramount influence in Palestine by 2375 B.C., and they continued to be the most powerful people in the country down to about 1600, when the XVIII Dynasty Kings of Egypt became supreme.

Bethpelet was thus originally an Amorite fort, and succumbed to the Hyksos supremacy by 2400 B.C.

We may note that, if the Hyksos were an amalgamation of Hittites and Amorites, this demands that the Hittites were in Palestine by 2400 and in control of Northern Egypt by that time also. This, I believe, will ultimately prove to be correct. We cannot get beyond the fact that everywhere, where we expect to find proofs of the Hittite immigration, the new features that we find are invariably Hyksos.

The ramparts of earth-filled walls are acknowledged to be Hyksos. The new pottery of the period (2400-1600) is

recognised as Hyksos ; and Hyksos weapons, tools, and scarabs are found, but little or nothing that we can definitely designate as Hittite. The conclusion seems to me unavoidable that the Hittites of the Old Testament are in some sense or to some extent the same people as the Hyksos or Shepherd Kings of Egypt.

The worship of El seems to have been the prevalent religion of the district around Bethpelet, as seen in the place names Qabtz-El, "the Congregation of El," and El-Tolad, "the children of El."

The worship of Yah or Yahveh, on the other hand, appears to have been held in disrepute. One of the towns in the same region is named Bisyoth-Yah, "the despising of Yah," clearly indicating an antagonism between the worshippers of El and the worshippers of Yah.

This must mean that El or El Elyon, the god of the Amorites, was the god of Bethpelet and the surrounding country, while "the despising of Yah" indicates their resentment of the intrusion of the Hebrews, who worshipped Yahveh. All four names are mentioned in Joshua's list (Josh. xv. 21-36).

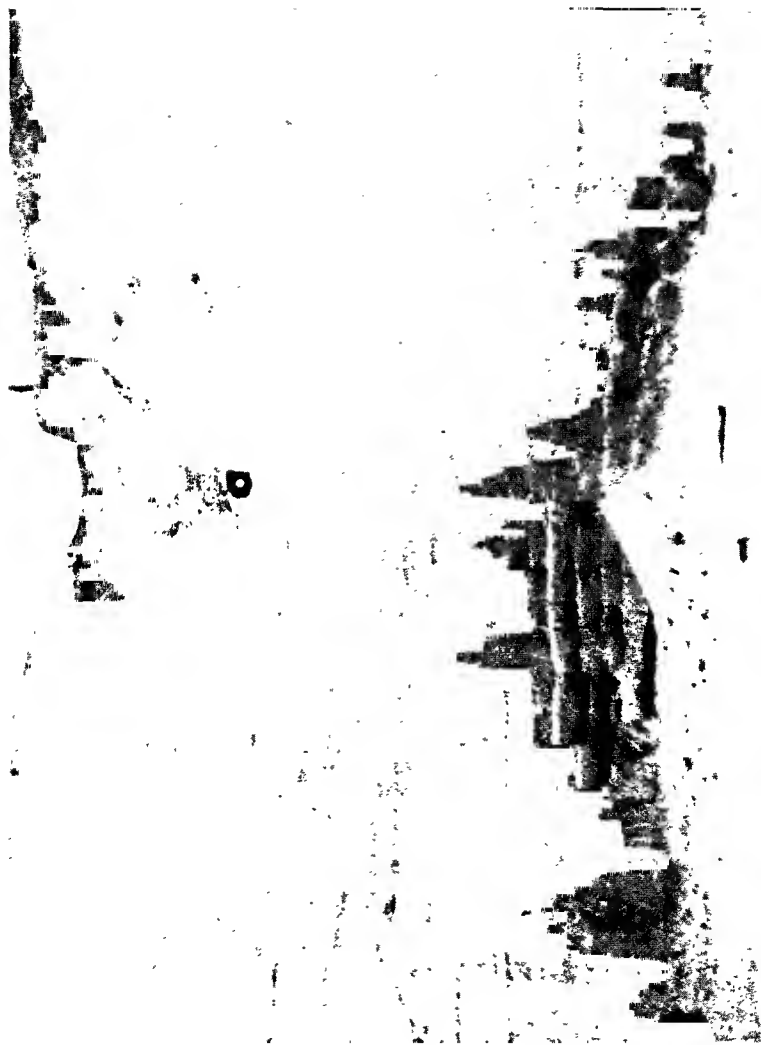
Tell Fara has thrown valuable light also on the Philistine civilisation. Four great family tombs of Philistine rulers or commissioners were discovered, and scarabs of Egyptian kings found in them assign these to the period 1300-1100 B.C.

The tombs had been in use for two or three generations and contained many bodies. Abundance of pottery of the class recognisable as Philistine was found, and of these the painted pots showed designs that had been copied from Cretan ware.

In one tomb dating 1100 the coffin had a pottery mask which "gives some idea of the Philistine type of face, a large aquiline nose, short beard under the lower lip, and plaited locks at the side." This is an authentic contemporary portrait of the Philistine who occupied the coffin.

The same tomb contained a bronze dagger with bone handle, and a long, thick iron knife. Only one tomb contained no weapons. The most interesting weapon found was a dagger with inlaid ivory handle and a sheath with chain attachment. This had been worn on the upper arm.

In the Hebrew stratum were found several workshops of flint sickle-makers, who reproduced the Neolithic types of flint tools found in the district. Apparently bronze and iron were still too expensive for the Hebrews, or they had no smiths



PREHISTORIC BRONZE AGE FORT, 16 FEET
THICK FOUNDATION WALLS



BETHPELET SECTION THROUGH THE GREAT WALL.

to fashion tools of these metals. It may be that here we have corroboration from excavation of the words in 1 Samuel xiii. 19, where apparently the Philistines did not allow the Hebrews to have smiths, lest they should make them swords and spears.

The Hyksos fortification of Bethpelet¹ is on a larger scale than any previously known and is unique in one respect—a long trench 80 feet wide and 28 feet deep was cut to isolate the hill fort from the surrounding plain.

The wide-mouthed, thick cremation jars found on the site are a new class. By the juglets accompanying them, they are dated 1000-900 B.C. There is no evidence to show who used these or introduced the custom of cremation at that period. It may be that the strangers who cremated their dead were the Central Asians settled by Shishong (Shishak).

AMORITE PALACE-FORTS OR GOVERNORS' RESIDENCES AND OTHER PUBLIC BUILDINGS

Large and important public buildings of the early Amorite period, such as governors' residences, public treasuries, with judgment halls and storerooms, have been discovered at Gezer, Ta'anach, Lachish, and Jericho. At Bethshan, also, three streets outlined by the ruined houses at the sides have been found as they were last used.

These public buildings are of such massive construction as indicates that they were practically forts or citadels within the city: and it is very probable that in every fortified Amorite town at least one tower on the wall or within the town was the residence of a governor, or "king" in the Old Testament sense, in which the public archives and public treasures were preserved. Such instances as have been found confirm this. Special care, for instance, was taken to secure an independent water-supply for these palace-forts: and space was provided for storing supplies of food to meet emergencies. They were also frequently near to and commanded one of the city gates, so that escape or secret egress might be possible when necessary. On the approach of an enemy the governor could thus make an early escape, remove treasures to a safe place, or defend his palace as he chose.

GEZER.—1. One of the earliest of these palace-forts, dating about 2000 B.C. and built of stone, was found at Gezer.² It

¹ Bethpelet II, p. 1 (Petrie).

² Gezer I, 205.

stood just inside the south gate, with its two large brick towers, and commanded it. In the centre of its large courtyard an opening led into the great water stairway (described elsewhere). The palace thus controlled the supply of water from this deep underground spring. One small chamber contained a row of jars with burnt grain in them. This had been a storeroom, probably one of several.

There were more rooms in this structure than in any other building on the mound. Those rooms remaining are chiefly on the east side. In two at the south-east were found bases of pillars which had supported the roof. These were mere slabs of stone laid under the wooden pillars to prevent them sinking into the earthen floor. The roof itself, of wooden beams covered with wattle and mud, was heavy. The slipping of two of these pillars off their bases would have been quite a possible feat for a strong man and would cause the collapse of the roof.

To the north was a large hall divided into two aisles by a partition wall. In the northern aisle the roof was again supported by pillars that had rested on massive stone bases. This had probably been a public business room or judgment hall.

A fine fragment of Cretan ware found in this palace fixes the date as prior to 1800 B.C. (M.).

2. But this had not been the earliest structure on this spot. The walls of a palace of earlier date were found beneath it. This must date from the first arrival of the Amorites.

3. Just to the north of it the palace of the next period (1800-1400 B.C.) was traced. It is less pretentious, and was partly of brick, partly of stone. The only outstanding features are a small pillared hall and an important granary or series of store chambers.

This may have been merely an extension of the older palace-fort, and it was built after the Hittite conquest.

4. *Horam's Palace* (Josh. x. 33).—The next palace-fort of Gezer belongs to the period 1400 B.C. to 1000 B.C. This is the period of Joshua's conquest: and this may have been the Palace of Horam, "King" of Gezer, whom Joshua conquered (Josh. x. 33). It had lain an exposed ruin for a long period, and consequently no safe dating material was found in it. The old inner wall of the city served as its back wall, and its side walls were close, though not bonded, to the wall of a

tower. This structure was on the north side of the city. Its main entrance on the south wall led into a hall, which communicated with the chambers by doors. Its walls are the strongest found in Gezer (3-9 feet thick) except the city walls.

Two fine bronze axes, a spearhead of bronze, a three-footed stone vessel, an alabaster vase and some potsherds were found in one room.

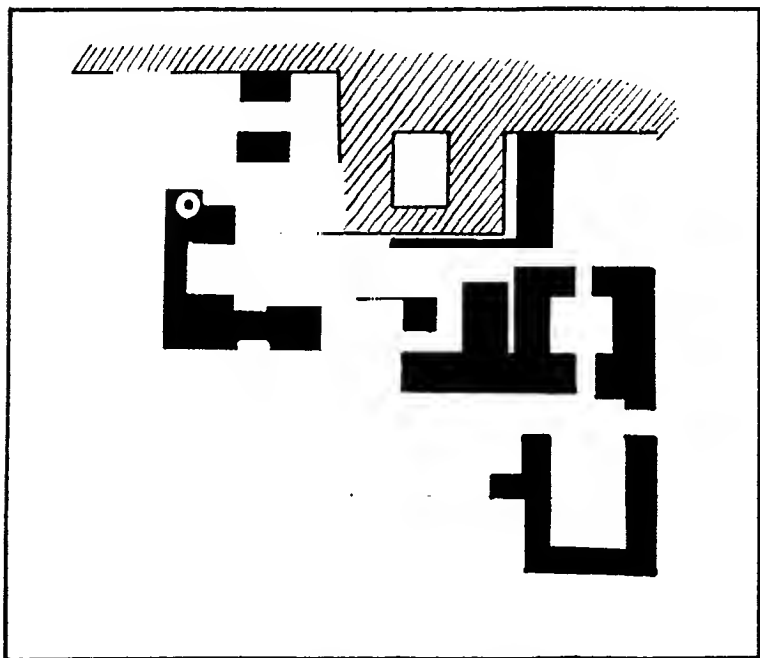


FIG. 20.—HORAM'S PALACE—1400-1000 B.C.

The general plan of these palace-forts thus consisted of one or more central courtyards or halls, with chambers arranged round them, just as in ordinary houses.

5. Toward the west of the mound another public building was traced, and here the two cuneiform tablets, which are legal documents, were found in such position as suggested that this structure had been a hall of judgment, or depository for legal documents about the fifteenth century B.C.

GEZER : BRICK STRUCTURE DATING 1800-1400 B.C.¹

This structure had very thick brick walls, with an outside stone revetment wall. The bricks are sun-dried and measured 16 inches long and 5 inches thick, as in the houses of Jericho elsewhere described.

The house contained about eighteen rooms in all, and these are better laid out than usual at this period. In two rooms, A and B, there was a store cupboard hollowed in the wall. One is oval, measuring roughly 5 by 4 feet and 27 inches deep. The other is 27 inches square and only 6 inches deep, a mere recess. In another room (E) was an oven. This is interesting as another example of stone and brick used together in the same building. In the second palace at Gezer, dating also 1800-1400 B.C., stone and brick are used together.

Both of these support my contention that the outer wall at Jericho, which is stone and brick mixed, may be as old as 1800 B.C. This building seems to belong to the same period.

Gezer has thus supplied us with four or five important public buildings ranging in date from 2000 to 1200 B.C., and throwing considerable light not only on the methods of building construction, but also of government among the Canaanites.

TREASURIES OR STORE CHAMBERS

Lachish.—Three structures were found in Tell-el-Hesi, dating about 1500, 1400, and 1300 B.C., which seem to have been public treasuries or store chambers—one in City III stratum and two in that of City IV.

The first was of brick, the outside walls being 9 feet and the partition walls² 4 feet thick. It was built on to the north wall of the city. Of the nine chambers, five measured 30 by 8 feet, one 22 by 15 feet, and two were smaller. The main entrance was at the east end, and the connecting doors between the chambers were all in the corners, thus saving a door-jamb, as in the ostraca house at Samaria.

This structure had extended to the east, and in a rubbish heap just east of it was found the tablet of the Tell-el-Amarna series, which affords a date point. The building was thus in use when Amenhotep IV of Egypt held Lachish. His governor is named Zimrida in the Tell-el-Amarna Letters.

¹ *Gezer* I, 170, Pl. 49, 2.

² Cf. "Horam's" palace at Gezer, of same date.

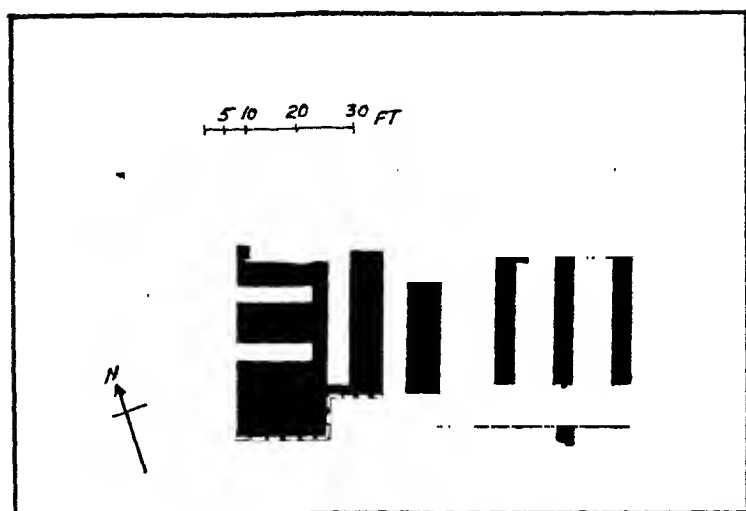


FIG. 21.—LACHISH CITY III, 1500 B.C.

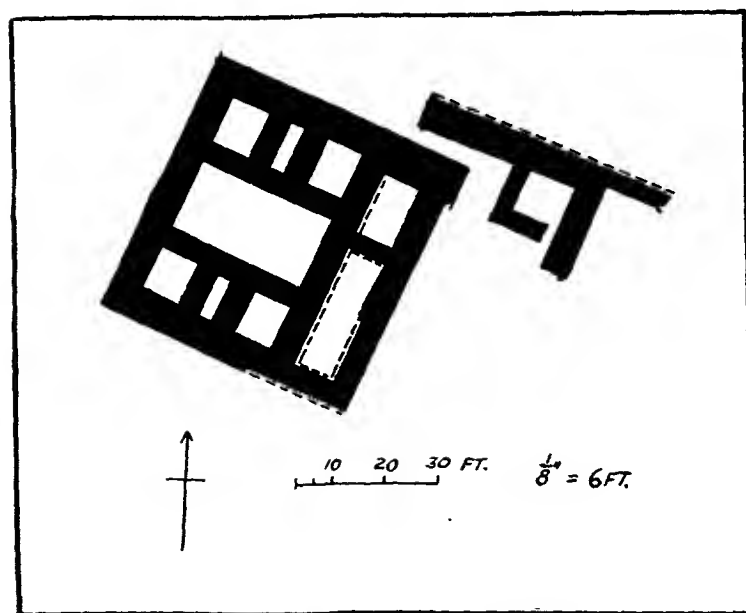


FIG. 22.—LACHISH CITY IV, 1400 B.C.

These corridor chambers are strongly suggestive of a treasury or series of store chambers. In Egypt, granaries were frequently built on to city walls in this manner, as I found at Gheyta in Goshen.

The eastern section may have been a depository for State treasures and documents, as the tablet suggests. This would explain the total demolition of the eastern part.

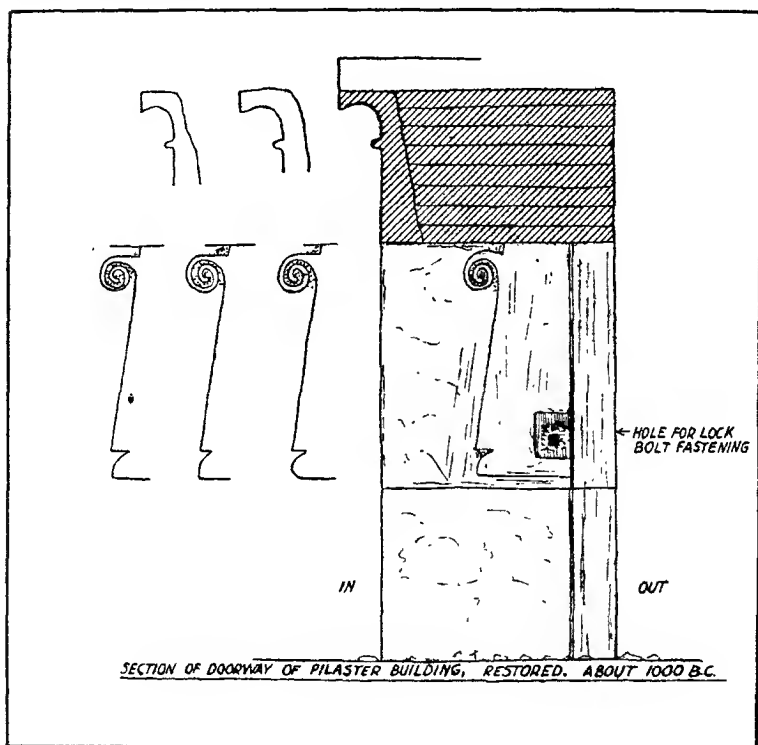


FIG. 23.—LACHISH MASONRY.

The next (City IV, 1400 B.C. stratum) exactly resembles one-third section of the ostraca house or treasury of Ahab, at Samaria. It is 56 feet square. Its central corridor (30 by 15 feet) has three rooms on each side, and at the eastern end is a long corridor divided into two long store rooms, each 8 feet wide. The outside walls are $5\frac{1}{2}$ feet thick, and the partition walls 4 feet.

The walls of brick are all laid on a bed of fine yellow sand, which is traceable even where the wall has disappeared. The same feature was found at Gerar.

1300 B.C.—The third structure is known as the pilaster building, because of the limestone pilaster slabs, which had lined one of the entrance passages. This structure of sun-

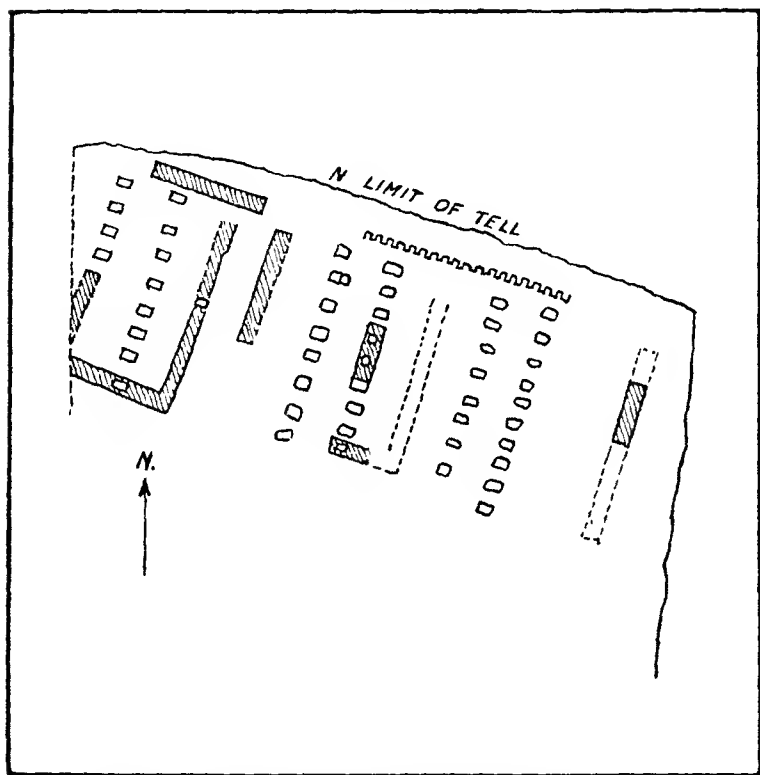


FIG. 24.—PILLARED BUILDING: STABLES OR TREASURY OF SOLOMON AT LACHISH.

dried bricks was only about 22 feet square, and its walls about 4 feet thick. It had been roofed with wooden beams.

On the north side there was no door, but on each of the east, west, and south sides there were two. It must thus have been some public building, and probably connected with other structures west of it. The limestone thresholds were laid on

a bed of clean sand, 6 inches deep, as found in the previous structure described above.

The noteworthy features of this structure are as follows :

1. The bricks (measuring 13 by 7 by 4 inches) were quarter-size bricks, such as were found in the citadel of Megiddo, and may be bricks reused from an earlier building. The full-sized brick at Megiddo measured 26 by 14 by 4 inches.

2. A fragment of a lintel was found with a cavetto moulding, similar to what occurs on the "Egyptian" tomb of Solomon's Egyptian wife in Siloam, as some name it.

3. The slabs bearing pilasters in low relief were turned upside down, so as to use the dovetail recess to receive the metal fastening of the lock of the door.

4. The stone jamb of the south-south-east door had the graffito of an animal on it, also upside down.

From these and other indications, it appears that the stonework, lintels, thresholds, jambs, and pilaster slabs had been taken from an earlier building. Similar slabs, unornamented, were used at Gezer to line the walls of the south gate entrance and protect the bricks from passing traffic. The same protection was used on walls at Gerar (p. 140).

5. The volute of the pilaster is clumsy and suggestive of a ram's horn nailed to a wooden post. It may be the prototype of horns of the altar in the temple decoration at Jerusalem. It is perhaps the earliest type of the Asiatic volute and the ram's horn is the origin of it.

6. The structure had been roofed with wood and burned down.

7. The dressing of the stonework in it is not Solomonic.

8. The building had been a treasury or storehouse or part of one.

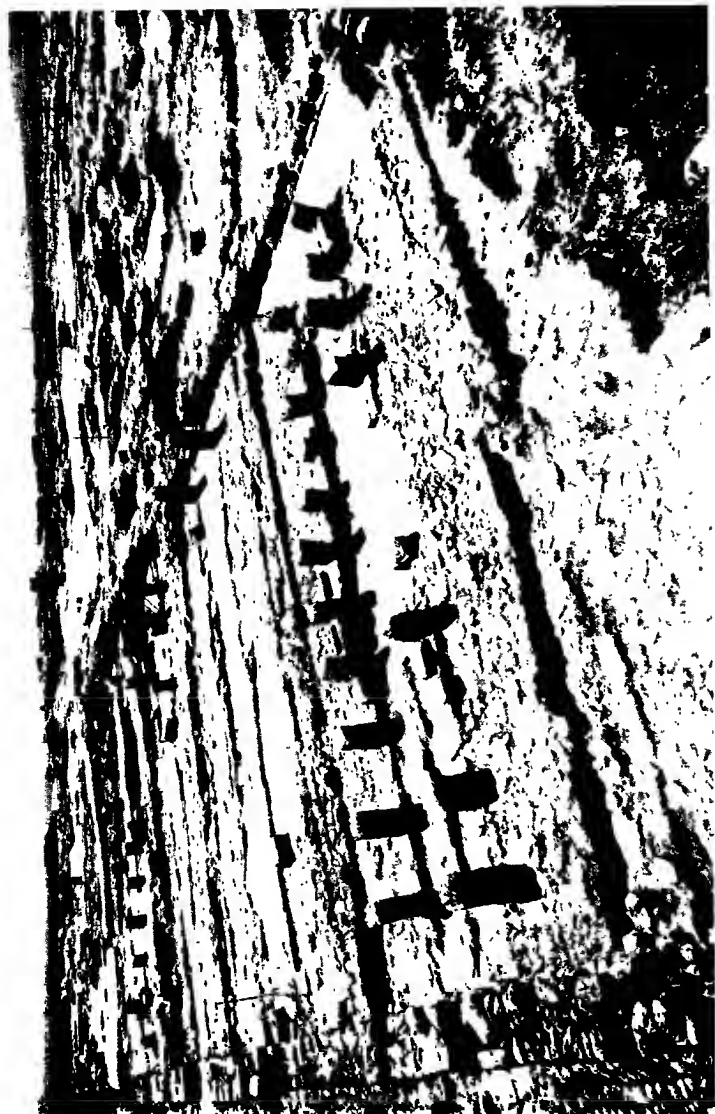
TA'ANACH : GOVERNOR'S RESIDENCE, FIFTEENTH CENTURY

The residence of Ishtar-Washur, the governor, at Ta'anach was a fortified building closely resembling the west fort of Ta'anach in style, masonry, and materials used, but is so utterly ruined that even a ground plan was impossible. The masonry was a mixture of stones and mortar. Field stones, pebbles, and stones well shaped all occurred.

This had been an early building, repaired at a later date (see Fortifications by Solomon at Ta'anach).



GEZER THE LARGE BRICK BUILDING 1800 B.C.



SOLOMON'S STABLES AT MECHIBBO
(See p. 248)

The presence of tablets of the Tell-el-Amarna series found in its ruins proves it was probably occupied by an Assyrian or Egyptian governor about 1450 B.C. The later masonry, however, is described by Sellin as the same as that of the other forts, which are Solomonic.

It is remarkable that in three of these large buildings, Gezer, Lachish, and Ta'anach, which I have suggested were "kings' treasuries, or governors' residences, tablets were found inscribed in cuneiform. This seems to confirm the identification, apart from the resemblance of the plans, to that of the palace of Omri and Ahab at Samaria. They are residences and treasuries of the Hittite-Amorite period, and show what their system of government was. A "king" or governor was appointed to reside in and take charge of such forts with the district around. One of his duties was naturally to receive and store the revenue as it was paid into the treasury. The Hebrews continued the same system.

AMORITE DWELLING-HOUSES

Ordinary dwelling-houses, dating from prior to 2000 down to 1200 B.C., have been found at Jericho, Gezer, and Bethshan.

Houses on the Wall.—It was a common practice to build houses against the wall of the city, using the city wall as the back wall of the house. Reference is probably made to such houses in Isaiah xxii. 10, where houses were broken down by Hezekiah to repair the city wall (see also Josh. ii. 15).

A good example of this was found in Jericho.¹ Built against the north side of the inner brick wall of the period 2000-1800 B.C. is a block of houses divided in two by a narrow lane, barely 7 feet wide. The block is almost rectangular. The section north of the lane is divided into seven rooms by parallel walls. These walls are of brick, resting on a foundation of two or three courses of rough stones. Three of these walls are built into—i.e., bonded to—the city wall, and were found standing *to the same height as that wall*.

The house really belongs to the earliest settlement, and has been incorporated by the builders of the double brick walls, since the inner wall passes over part of it, and had been built in haste, for large store jars lying in one of the rooms are actually built over by the wall. The date of this house is,

¹ See *Jericho*, pp. 33 ff., Pl. 8, Plan II.

therefore, prior to 2000 B.C., but the slight accumulation of debris proves that it had not been long destroyed when the city was again rebuilt and fortified.

The builders of the double brick walls used this house for some military purpose, probably extending it. Some of its walls are built above the walls of the earlier house. Thus we have here an Amorite house, dating from perhaps 2500 or earlier, with a later adaptation of it by the invaders who destroyed the city about 2000. These invaders were probably the Hittites.

The city wall served as a back wall to the fourth room, and on the face of it are three deep round holes, into which wooden beams had been inserted to form a stair leading to the roof of the house. For similar holes for beams, compare the chambers between these double walls of Jericho (p. 120 above). The roof of this house had been level with the top of the city wall, and formed a sort of inner tower or platform, or it may be that from the roof of the house the top of the wall could be reached by a ladder or another series of steps.

In two of these seven rooms large store jars were found, and one mortar for pounding grain in the third. The wall foundations indicate that the rooms were about 18 feet long, and varied in width from 7 feet to 11 feet (by the plan).

On the south side of the lane the block includes some seventeen or eighteen chambers of one kind or another. Room A on the plan measures 22 feet by 10 feet 4 inches. It is trapezoidal in shape, the corners not being rectangular. In the south-west corner a *baking oven* built of clay was found, and the north-east corner was walled off by a stone enclosure to form a sort of cupboard or hearth. This was, therefore, a dwelling-room. West of this room is a small room, rectangular in shape, which may have been an inner chamber leading off Room A, but no trace of a door remains.

Room B is also trapezoidal, and measures 20 by 12½ feet. In the centre of the floor is a stone block on which probably rested a wooden pillar to support the roof.

Room D had been rebuilt and extended in the late Bronze Age. An irregular space to the east of it may have been a courtyard.

It is doubtful whether this block was one large structure, or, more likely, a series of houses. There are no indications of doors, perhaps because only foundations remain.

Under Room A and its adjunct was found a stone plinth of a house of the earliest period. The walls of this earlier house appear also under Room B.

Room C is irregular in shape, owing to the outside wall following the bend of the lane. It measures about $16\frac{1}{2}$ feet by 10 feet. The irregular enclosure between it and Room D may have been a courtyard. In the north-west corner of this enclosure is a large three-cornered pit, enclosed by a rounded stone wall.

It should be noted that not one of the rooms of these houses was wider than 12 to 13 feet. This seems to have been the maximum roof-span for wooden beams that they found practicable. Where rooms were wider, pillars were added in the centre, and roof beams from each side met on the beam supported by the pillars.

HOUSES OF MIDDLE AND LATE BRONZE AGE

2000-1200 B.C.

JERICHO, PLAN III

The structures shown on Plan III of Jericho¹ were assigned to the Hebrew period by Sellin and Watzinger, mainly on the supposition that the outer stone and brick wall was Israelite and built by Hiel the Bethelite.

There is no doubt, however, that this third and latest wall of Jericho was built about 2000-1800 B.C., and is a Canaanite wall. It was the wall of the town during the Middle and Late Bronze Ages, and consequently the wall of the period of Joshua.

These structures are dwellings erected on the space between the old outer and inner brick wall fortification and this third wall. After the city had been taken, at about 2000 B.C., probably by the Hittites, these double walls were destroyed, and a series of stairways had been made for a temporary purpose, perhaps to assist the levelling down of these old city walls. The walls and stairs fell into disuse almost immediately, for these dwellings are built over them without any accumulation of debris between them.

The houses belong, therefore, not to the Israelite period,

¹ *Jericho*, pp. 63 ff. and Tafel, III.

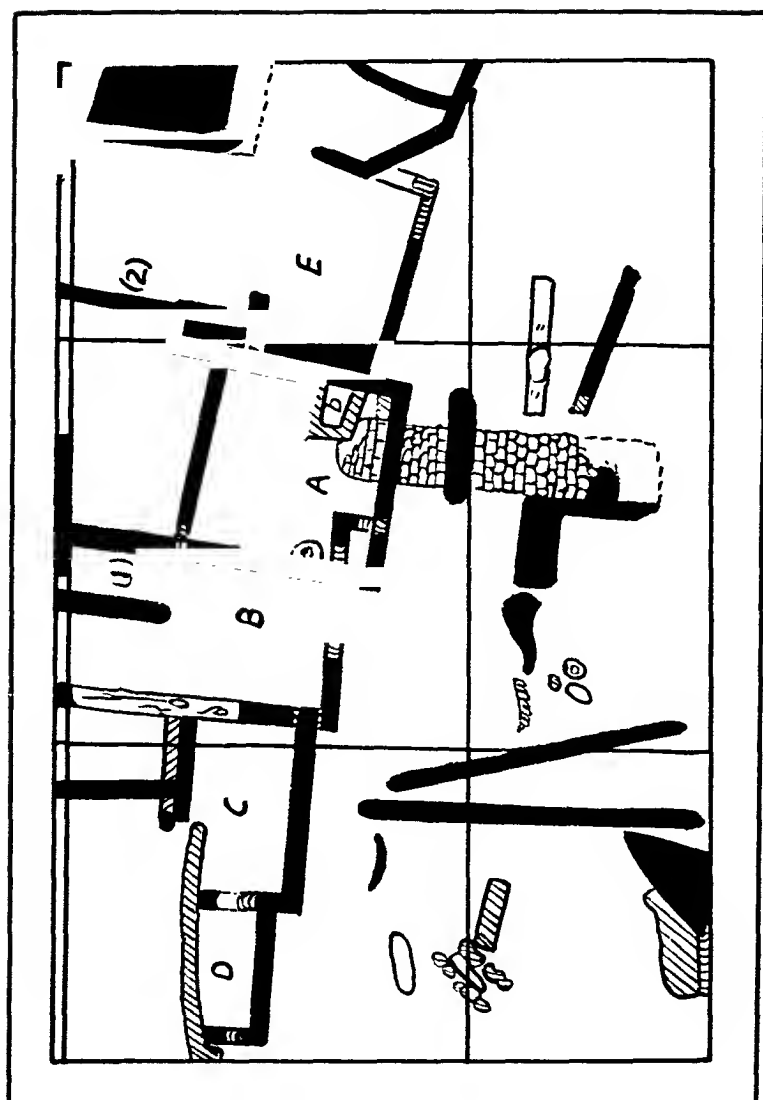


FIG. 25.—HOUSES AT JERICO.

but to the Middle Bronze Age, and date about 1800-1400 B.C. They are built of the same sun-dried bricks as the third or outer wall, measuring 21 by 15 by 5 inches. These bricks of themselves are not conclusive evidence, though suggestive of a very early Canaanite origin: but the pottery found in the houses—e.g., Houses A and B—is unmistakable ware of the II and III Bronze periods, and not Hebrew, as the authors have classified it. Many of the specimens are button-base jugs, usually regarded as Hyksos ware, and dating between 2000 and 1600.

Only mere foundations remain, so that no idea of the complete structure can be obtained.

House A on the plan consists of two oblong rectangular chambers, the outer measuring about $16\frac{1}{2}$ by $6\frac{1}{2}$ feet wide. This may have been one chamber (16 by 15 feet) divided by a row of columns. The whole house is only $16\frac{1}{2}$ by about 17 feet. At the north-east corner there is a small annexe, but whether it was part of the house or not cannot be decided, since no trace of doors remains. If there was an open courtyard, it was on the north side, and both east and west walls of the structure are continued northwards, but these continuation walls appear to belong to an earlier building. They may very likely have been used as the foundations of the walls of the courtyard of the later house.

A Hearth walled off by field stones, with ashes inside it, was found in the south-west corner of the larger room, and in the north-east corner was an elevation, walled in by brick, containing some vessels and fragments. This had served as a *cupboard*, and the room had been the living-room or kitchen. In a hollow near to the fireplace was found a *mortar* which had been much used for pounding grain. Ten inches under the floor of the other room was found an amphora, or water jar, containing *the body of an infant*, and some small vessels. This had been a burial, not a foundation sacrifice.

Under the floor of the House B was found another infant burial in a large amphora, and beside it a fine jug with lilac decoration. This jug had a button-base, and is a fine example of the Middle Bronze Age ware usually regarded as Hyksos. It dates about 2000-1600 B.C.

House E, to the east of A, is similar and measures about $17\frac{1}{2}$ by $12\frac{1}{2}$ feet.

These five houses were all built of *sun-dried bricks* laid on a

rough foundation of two courses of undressed stones. The lowest course projects beyond the upper, making an offset. The bricks vary considerably in size, one being found measuring 16 inches square.

The walls vary from 14 to 18 inches in thickness. They are the houses of the poorer quarter of the town, as their position and size suggest; and they closely resemble the poorer class of modern houses in Egypt and Palestine. Probably each had a small courtyard in front, walled in with stones and mud and open to the sky, exactly as in the poorer houses of today. The house itself may have consisted of only one room.

BETHSHAN HOUSES : STREETS : ARCHED ROOF. 1400 B.C.

At Bethshan the houses of the Amenophis III level (1400-1375 B.C.) were built of sun-dried bricks resting on small foundations of stone as a rule.

Between the courses of bricks, reeds were often laid to strengthen and solidify them. The bricks were all laid as stretchers, never stretchers and headers alternating, which would have made much stronger bonding.

The insertion of reeds, however, suggests that the bricks were used while they were still soft enough to become closely and firmly joined to each other, otherwise the reeds could not have served their purpose.

The finished walls were coated with mud plaster.

Streets.—Three Canaanite streets were found in Bethshan exactly as they had been used last. The main street seemed to have had a vaulted roof over it, as the walls on each side converge slightly together at the top. This may have been part of a bazaar.

Arch.—Certainly two rooms to the west of this street had vaulted brick-built roofs of barrel shape. This is probably the earliest instance of an arched roof known in Palestine, and dates about 1400 B.C.

From these data we learn nothing about the actual plan or appearance of a completed house of the earliest Canaanite period. All that we learn is the nature of the construction, the general plan of the house, and the probable size of the rooms, with such furnishings as are indicated—ovens, cupboards, store jars, stairs, mortars, hearths, pillars, wood and clay roofing, burial of infants under the floors, and pottery vessels.

Store rooms, secret cupboards, cisterns, stone-paved floors, refuse pits in the courtyard are also found.

The structures are chiefly a mass of foundation walls, demolished to so low a level as to leave no indication of entrances even.

House walls at Jericho were of brick resting on a rough foundation of undressed stones laid in mud-mortar : but where stones were as easily procurable as brick, stones and mud-mortar were used.

IV

HEBREW CONQUEST AND OCCUPATION

1300—1100 AND 1100—597 B.C.

HEBREW CONQUEST AND OCCUPATION

PERIOD OF THE HEBREW CONQUEST AND PRE-EXILIC PERIOD

1300-1100 AND 1100-597 B.C.

THE Hebrews arrived in Canaan somewhere between 1300 and 1200 B.C. That no absolutely indisputable evidence of their presence has yet been found during these years is due, perhaps, partly to the fact that no purely Hebrew site of that period has yet been excavated: partly because the Hebrews did not at once occupy or reconstruct conquered strongholds, but simply squatted on the ruins in nomad fashion: and partly also, because while they occupied the rural districts, the capture of the strongholds—*e.g.*, Gezer, Ta'anach, Megiddo, Bethshan, etc.—was not at once accomplished. According to the Old Testament narrative they did not at once succeed in driving out the Canaanites, but left them in occupation of conquered towns, and made them tributary or bondmen, as they subdued them. The sites excavated confirm this. There is no trace of the Hebrews in Zion and Gezer, *e.g.*, till 1050-950 B.C.

It may be, therefore, that for Hebrew remains of the period of the Conquest we ought to search *not the town sites*, but the remains of village or rural nomad settlements in the hill country.

Traces of the presence of the Hebrews in Canaan during the period of the Conquest, 1215-1100 B.C., have been found at Tell-el-Hesi (Lachish),¹ and Ain Shems, Jericho, Gerar, Ta'anach, and Bethpelet, though this is largely a matter of inference. Some of these sites, notably Lachish, Jericho, and Ta'anach, show a period of complete or partial destruction of the city walls and burning of the city, followed by a period of squatter settlement, during which the town remained unfortified. This break in the history of their occupation, as indicated by the pottery and other remains, falls invariably

¹ The stratum assigned by Petrie to the Israelites is under City Sub. IV, dating from about 1450 B.C.

into the period between 1400 and 1200 B.C., and thus may be fairly regarded as the work of the invading Hebrews.

The period of squatter settlement, after subsisting for one or two centuries, as shown by the depth of the accumulated debris, as well as its contents, in its turn gives place to a re-fortification of the sites, when the masonry is plainly attributable to the early Hebrew monarchy, 1000-800 B.C. This is established not only by the type of masonry, but by the distinctive Hebrew ware found on that level.

We may thus safely say that some of the towns named in the Old Testament as having been captured by Joshua or his successors, so far as these have been excavated, agree either in supplying evidence of complete (or partial) destruction, followed by a period of purely nomadic occupation at the very period to which the conquest of Palestine by the Hebrews must be assigned, or supply other evidence suggestive of Hebrew occupation. The pottery of this period (1400-1100 B.C.), however, is Canaanite, though many of the forms are quite common in Hebrew ware.

This is in accordance with what the Old Testament itself leads us to expect, as, *e.g.*, in such passages as Joshua xvii. 14-18, where the Ephraimites are advised to hold on to the uplands, cut down the woods, and cultivate the hilly rural districts around Esdraelon and wait patiently for the conquest of the Canaanite strongholds on the plain, "with their chariots of iron."

In many parts of Palestine the early Hebrew occupation thus much resembled that of a pioneer colonist in Western Canada. Unable at first to capture the towns, they occupied the woods and highlands. They had to cut down clearances, in fact, for farming, and probably for villages.

Joshua xvii. 17-18 suggests to my mind that on the high ground around Esdraelon we may expect to find the remains of villages of the early Hebrew occupation.

Some towns, however, they did succeed in capturing, and in some cases they appear to have settled down on the ruins in nomad fashion without rebuilding the walls.

The first point where we find solid ground, and definite archaeological contact with the historical record of the Old Testament, is at Jerusalem, which must have been captured by David prior to 1000 B.C. The date of Solomon, his successor, has been definitely fixed, by comparison with

Assyrian monuments, at c. 1000-960. The reigns of Saul and David can therefore be assigned with certainty to the eleventh century.

At about 960 B.C. the northern kingdom was founded by Jeroboam, with its capital first at Shechem, and soon afterwards Omri transferred it to Samaria. In 721 Samaria was destroyed, and the northern kingdom came to an end.

Thus for the Hebrew pre-Exilic period we have several dates fixed with practical accuracy. The kingdom of Judah continued its precarious existence from its founding by Saul in the eleventh century to the year 597, when Nebuchadnezzar carried the *élite* of Jerusalem and Judah captive to Babylon. This constitutes the Hebrew pre-Exilic period. Though Northern Israel broke away from Judah about 960, and had its own king, the separation was confined to government and religion. Otherwise, the people were the same people with the same civilisation, and the remains found at Samaria—such as buildings, walls, pottery, jewellery—are much the same as those found at Jerusalem or other sites in Judah, except that the style of masonry is distinct.

Prior to the founding of the kingdom and the choice of Saul as king, under whom the Israelites united for aggressive as well as defensive warfare, there seems no doubt that the Israelites were simply nomad tribes, who, on capturing a town, settled on its ruins, and formed a village, but built no walls or fortifications whatever.¹ Petrie has noted this in the case of Tell-el-Hesi (Lachish), and the stratum which he assigns to their occupation seems to coincide exactly in date with this Israelite nomad period. It would be difficult, therefore, to assign any remains to the nomad Israelite, who was not a builder, and apparently used the pottery made by the people around him.

David, however, was a great builder, and Solomon with his knowledge of Egypt far outstripped him. Rehoboam, Asa, Uzziah, Hezekiah, and Manasseh followed in their footsteps. Discoveries at Samaria show that Ahab and Omri were also great builders. Repairs on the fortifications are found at Jericho of a totally different type from Davidic or Solomonic, which may be the work of Hiel the Bethelite, who rebuilt Jericho (1 Kings xvi. 34).

¹ On this point, however, see Kirjath-Sepher, rebuilt by Othniel.

The early part of the Hebrew period, therefore, dating from the arrival of Joshua at Jericho, prior to the founding of the kingdom under Saul in the eleventh century—*i.e.*, 1210-1080 B.C.—is practically a blank, so far as definite archæological knowledge of the Hebrew civilisation is concerned.

THE POST-EXILIC HEBREW PERIOD

Strictly speaking, the period of Hebrew occupation continued from about 1100 B.C. to A.D. 70, when the Jews were finally dispersed by the Romans. The pre-Exilic period dates from their arrival to 597 B.C., when Nebuchadnezzar took Jerusalem. The post-Exilic period dates, therefore, from 597 B.C. to A.D. 70. The various civilisations which made their influence felt in Palestine during these years—the Babylonian, Persian, Greek, Hellenistic (including Maccabean), and Roman—are all dated with accuracy from other sources, and need no discussion. Greek influence appears as early as 700 B.C.

The Roman influence persisted till about A.D. 350 or 400, when that of Constantinople under Constantine the Great and his successors took its place. It is at this time, A.D. 350 onwards, that Christian influence and beliefs begin for the first time to imprint themselves on the products of the country, and lamps are decorated with crosses and other Christian symbols.

This in its turn gave place about A.D. 660 to Mohammedan influence under the Arab and Turkish occupations, which has continued until recently, when a Christian country has again been entrusted with the government of Palestine.

The history of Palestine has thus from the outset been a long series of occupations by foreigners. The native civilisation has had no opportunity to develop. Palestine has all along been the cockpit of the Near East. The people have been subjected to civilisation after civilisation imposed upon them, till they have earned the reputation of being born imitators. It is true, and of none is it more true than of the Hebrews themselves.

From at least 3000 B.C. downwards, the country has never been free from the influence of foreigners, whose products the people have diligently imitated, and the cave-dwelling civilisation is the only purely Palestinian product that exists. The great civilisation which by 4000 B.C. had entered Palestine

came, I am confident, from the north-eastern part of Syria, and is properly described as Amorite. It swept on in a stream of influence that was by no means confined to Palestine. The so-called Hyksos civilisation, which appears about 2400, was only an augmented continuation of this great stream, which was the result of an amalgamation of the Amorites with another great civilisation, that swept down from the north-west, namely the Hittite. It is now generally accepted that the Hyksos were the outcome of an amalgamation of various nations, of whom the Amorites and Hittites were the chief.

HEBREW FORTIFICATIONS

TELL-EL-HESI: THE HISTORY OF LACHISH

As reconstructed from the mound of Tell-el-Hesi, the history of Lachish is somewhat as follows. At 60 feet down from the summit level are the ruins of a walled Amorite city, which was built about 2000-1800 B.C. The earlier occupation on flat ground to the west of this fortification must date about 2500.¹

This wall of 2000 B.C. passed through various vicissitudes in the way of reconstruction and repair, but remained the only wall of the stronghold till somewhere near 1200 B.C.

In that period the city had been at least four times, if not six times, rebuilt or repaired.

At 45 feet from the surface were found the ruins of City II, which is definitely dated at 1450 B.C. by the cuneiform tablet and XVIII Dynasty scarabs found in that stratum.

What happened to City III we do not know exactly, but it had been completely destroyed, and the ruins lay waste for some considerable time.

On the top of the ruins is a wind-blown bed of ashes, 5 to 7 feet in depth. Petrie thinks the ruins were used by alkali burners, but Bliss thinks the ashes came from blast-furnaces, of which he found one excellent example.

The city, however, in either case remained unoccupied except by smelters or alkali-burners for some time.

Then a settlement was made on the ashes bed, and on the top of this rude settlement was raised City IV, which had the same walls, restored for its defences.

¹ See Petrie, *T.H.*, p. 31, § 27.

City IV subsisted from about 1400 till about 1200 B.C., perhaps, according to Bliss, and City V, a rough settlement with no city walls, took its place.

City VI in the mound of Tell-el-Hesi has been assigned by Petrie to the reign of Rehoboam, who succeeded Solomon about 960. It had been a fenced city, and Petrie and Bliss traced its wall along the northern side.

As the first mention of a fortifying of Lachish in the Old Testament is that of Rehoboam, in whose list of "fenced cities" it occurs, this wall is probably to be assigned to him.

Prior to this the ruins show that there had been no fortification built since the fort was taken and destroyed by Joshua or someone else in the period 1400-1300.

It is quite possible, of course, though no mention is made of it in the Old Testament, that Lachish had been refortified by Solomon or even by David.

No city wall was found belonging to City V (c. 1000 B.C.), but the curious pillared building, 112 by 45 feet, at the northern end of the mound may have been a fortified barrack of the period of David or Solomon. This building Bliss assigns to City V level, dating c. 1000. In Solomon's time, therefore, Lachish may quite well have been a revenue "outpost" like Ta'anach.

The wall of City VI is of *solid sun-dried brick*, resting at one point on a rough stone foundation, elsewhere on solid brick foundations. It measured about 10 to 12 feet in thickness, according to Bliss's plan, the bricks measuring 13.4 by 7.3 by 3.7 inches. It had been run out at the north-west corner to include the well. This well was lined with Gaza sandstone of courses 10 to 14 inches thick. The shaft was 88 inches across.

Some time after 950 the wall attributed to Rehoboam had been heightened and strengthened by the building of a thin wall or parapet on the front edge of it. Rehoboam's wall had been cut down, or had decayed, to only 6 feet of height. Petrie attributes this thin wall to Jehoshaphat (c. 910), who subdued the Philistines and Arabians (2 Chron. xvii. 11), and so needed to strengthen his forts against them. In the same chapter (verses 2 and 12) we find that he also "garrisoned all the fenced cities" and "built fortresses and store cities in Judah."

The next reference in the Old Testament to Lachish is in 810 B.C., when Amaziah fled there and was killed (2 Kings xiv. 19).

No further fortifying seems to have been done till the time of Uzziah. He warred on the Philistines (2 Chron. xxvi. 6) and the Arabians in Gurbaal and the Mehunims. Lachish would be a necessary basis of operations as well as a defence against them. He also built much (v. 10), and raised many cattle in the low country and the plains, digging many wells. Lachish with its excellent water-supply would thus be of great value to him.

Petrie found a fragment of a wall inside that of Jehoshaphat which may have been built by Uzziah about 800 B.C. This wall had soon after been intentionally destroyed, very probably by Rezin and Pekah in 735 during their fruitless siege of Jerusalem (2 Kings xvi. 5): but was immediately replaced by another city wall, probably by Ahaz, who made also the flight of stone steps leading up to the city on the south side of this fortification. The stones of the building near these steps have drafted edges like Ahab's masonry at Samaria, with a rough boss in the centre, but the drafting is smooth and shows no mark of a finely toothed edge, comb-pick, or "claw-tool." The only dressing mark is the long stroke of a pointed pick, "like the marks on the fort of Tell-es-Safi (Gath) and on the first building of the Beit el Khulil near Hebron." The city wall itself was of brick.

Behind this wall of Ahaz is the foundation of a thicker wall on the north side of the city, which had also been ruined soon after it was built.

On the south side also there is a long sloping glacis, 30 feet broad, made of blocks of stone bedded in the earth and covered with white plaster, which had apparently been a hastily constructed defence, the wall on the top being very small, and this wall too had very soon been broken down, "razed to the ground."

Petrie connects these rapid vicissitudes in the history of Lachish with Sennacherib's invasion in 701 B.C. Hezekiah had probably hastily repaired the fortifications when fighting the Philistines (2 Kings xviii. 8), or in preparation for Sennacherib's invasion, as he did at Jerusalem (2 Chron. xxxii. 3-5). The site shows that Lachish was badly destroyed by Sennacherib. The buildings above this level are of rude stones and bespeak a period of "barbarism" like the occupation in the time of the Judges.

After 701 the town was only once refortified, probably by Manasseh. This wall can be traced round a good part of the town. About 660 Manasseh fortified Jerusalem and put

captains in all the fenced cities of Judah (2 Chron. xxxiii. 14). Soon after this time Egypt was beginning to press into Palestine, a fact which brought Nebuchadnezzar down to consolidate against them. This wall must therefore be the wall destroyed by Nebuchadnezzar, *c.* 597 (Jer. xxxiv. 7), when he besieged and took Jerusalem. In that passage it appears as if Jerusalem, Lachish, and Azekah were among the few (if not the only) walled cities left in Judah.

From this period (590 B.C.) the place seems to have been occupied only by squatter settlements, Bedawin nomads, and even in 445, when the exiles returned, Lachish was not again fortified. Nor, as we have seen, was it of any importance in the time of Alexander the Great (*c.* 330), for no coins or other trace of him was found.

Lachish has thus had a troubled history, much like Jerusalem itself; but why so excellent a site should have been totally abandoned so early, it is difficult to say.

If Petrie is correct in his identifications, the correspondence between the mound's own story and the narrative of the Old Testament is marvellously complete. Even if the identifications be not all accurately timed, the two stories are practically the same. We have got an historical background of fact to all that the Old Testament says of Lachish.

It is worth while noting the measurements of the bricks used in these various constructions as given by Petrie. They are as follows:

Amorite wall, 22·8 by 12·6 by 4·2 inches (masonry headers and stretchers alternately).

Rehoboam's wall, 13·4 by 7·3 by 3·7 inches (apparently half-size bricks).

Manasseh's wall, 15·9 by 15·9 by 5·7 inches.

N.W. tower, 19 by 12 by 5·4 inches (*i.e.*, 4 to 6·3 inches): 5·4 inches = average.

W. wall, 17·4 by 12·3 by 5·1 inches (17·4 = average of 15·5 to 19 inches).

S.W. corner, 19 by 10·1 by 4·3 inches.

Wall over glacis, 19·4 by 8·3 to 12·8 by 4·7 inches (19·4 inches = average of 17·6 to 21 inches).

There was no fixed size for bricks. In fact, these bricks of varying sizes may have been taken and reused from the original Amorite constructions. The variation in size is due to the resquaring of the damaged bricks.

TA'ANACH IN THE OLD TESTAMENT

In Joshua xii. 21 Ta'anach is mentioned as a town given by Joshua to the Israelites "for a possession," but Joshua xvii. 11 and Judges i. 27 show clearly that it was not a "possession" already acquired, but a possession yet to be won.

In 1 Kings iv. 12 Ta'anach and Megiddo are united under one governor, Baana, appointed by Solomon. Baana had thus been in charge of the two garrisons stationed at these forts, and, while his chief task was the defence of the district, he was probably responsible also for the collection of the revenue. The curious plastered store chambers had been used for storing the revenue of corn, wine, and oil, until it could be transmitted to the headquarters at Jerusalem. The same system of defence and government was maintained by Solomon as had been employed by the Amorites, only the title "king" is no longer used to describe the governors of the various forts.

About 950, in the reign of Rehoboam, when Ta'anach had passed under the rule of Jeroboam I, Shishak attacked Jerusalem and was bought off with the treasures of the king's house and the temple. Shishak himself records that in this expedition he plundered Ta'anach also. The destruction of the fort by Shishak accounts for our finding masonry of Jeroboam's period in the excavations. Jeroboam or Ahab had repaired the breach made by Shishak. When it became part of the northern kingdom Ta'anach dropped out of the Old Testament narrative.

TA'ANACH: SOLOMONIC FORTS

The West Fort of Ta'anach is a rectangular tower (70 by 62 feet) of Cyclopean masonry, its west wall being 13 feet high as found, and about 4 feet thick. At the centre of its north wall was a massive tower, whose *east* and *west* sides were strengthened by buttresses projecting only 4 inches, mere vertical offsets.

There were nine rooms in the fort and another in the south gate tower. The walls of these rooms were about 4 feet thick, and the floors were covered with a thick layer of lime-mud plaster. The rooms averaged only 80 inches square in floor space. They were mere bins or small stores, and probably formed a framework foundation for more massive building above them, or a fighting-platform.

This fort or "tower" had a gate on the north, one on the east, and another at the south-west corner, with a small gate-tower. Near the south-west gate-tower was found the *jar-burial* of an infant. This had been a sacrifice offered on the completion of the building. Joshua vi. 26 shows that the

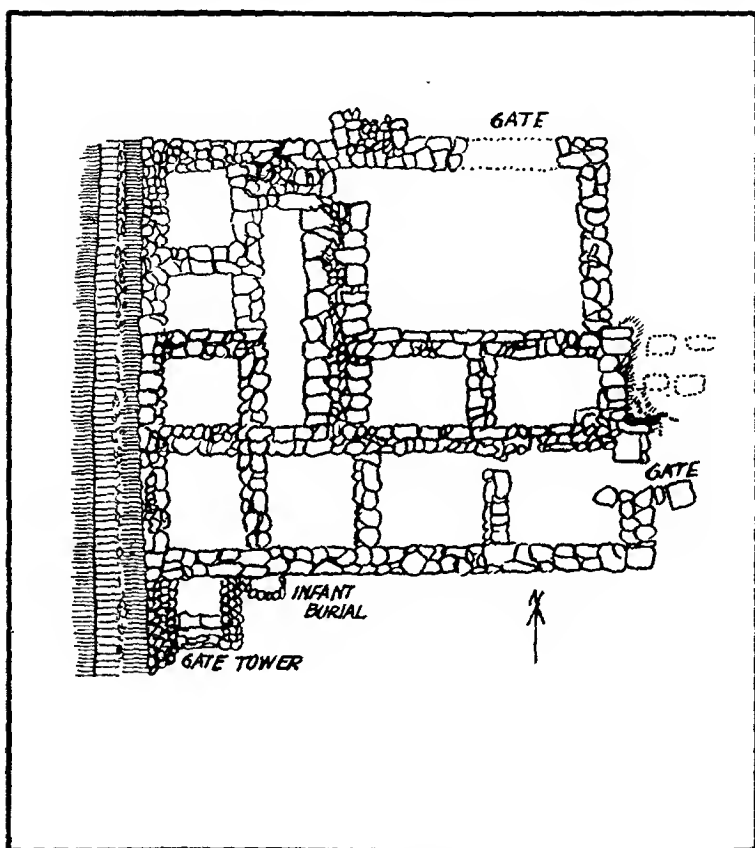


FIG. 26.—THE WEST TOWER WITH THE BINS.

setting up of the gates was the last piece of work in the construction of a fort, and that it was customary to offer an infant sacrifice at the completion, as well as at the beginning of the work. The gates, as in Joshua vi. 26, had been left to the last, and the south-west gate was finished last of all. Hence the "completion" sacrifice was offered beside it.

This fort is a garrison fort, and was not a tower or citadel associated with a walled fortress, but stood alone. It was much damaged.

Masonry.—It is remarkable for the series of small compartments with plastered floors; the massive outwork tower, on its north side, with the buttresses projecting only 4 inches; and the offsets of 4 inches breadth on the lower section of the walls. The plastered floors favour the idea that the rooms were small stores. There had been also a central open court, with a well or cistern and the living-rooms of the garrison around it, all of which have disappeared.

The walls rested on the rock surface. On the rock was first laid a bed of pebbles mixed with mud-plaster 26 inches deep. This had been allowed to harden. Above it, leaving an offset of 4 inches, was another layer of the same material 13 inches deep, with another offset of 4 inches. Above this was a bed 50 inches deep of large undressed stones, laid in mud-mortar, with another offset of 4 inches; and above this there were three courses of dressed stones, with a fourth offset of 4 inches. These were 68 inches high, and constituted the foundation proper. Thus from the rock the substructure and foundation of the wall measured 13 feet in height. These offsets are of the same depth as I found on the great tower of Zion.

Glacis.—Another noteworthy feature of the masonry is the addition of a sloping glacis of unusual composition supporting the base of the wall. Next to the wall was laid a sloping layer of pebbles and mortar 18 inches thick, on that a sloping bed of earth 6 inches thick, and above that a surface covering of pebbles and mortar 16 inches thick. The whole glacis is thus a banquette 40 inches thick, and it rises to a height of 9 feet.

This west fort or "tower" is regarded as the work of Solomon.

The potsherds and pots, bulky flint instruments, and bronze implements found under it, Sellin attributes to the period 2000-1300, and because of these he assigns the fort to the same period. The fort as it stands is undoubtedly Solomonic, but there had been earlier constructions under it.

The North-East "Tower."—On the north-east corner of the mound Solomon built another tower or garrison fort, which very closely resembles the west fort in size and con-

struction. It is four-sided, but no two sides are equal or parallel, and it covers a slightly larger area. Roughly it is about 78 to 80 feet square. It was built over an early Canaanite brick construction, which had been destroyed, and there had been rooms, the foundations of which are now barely traceable.

This "tower" is of well-dressed and squared blocks of

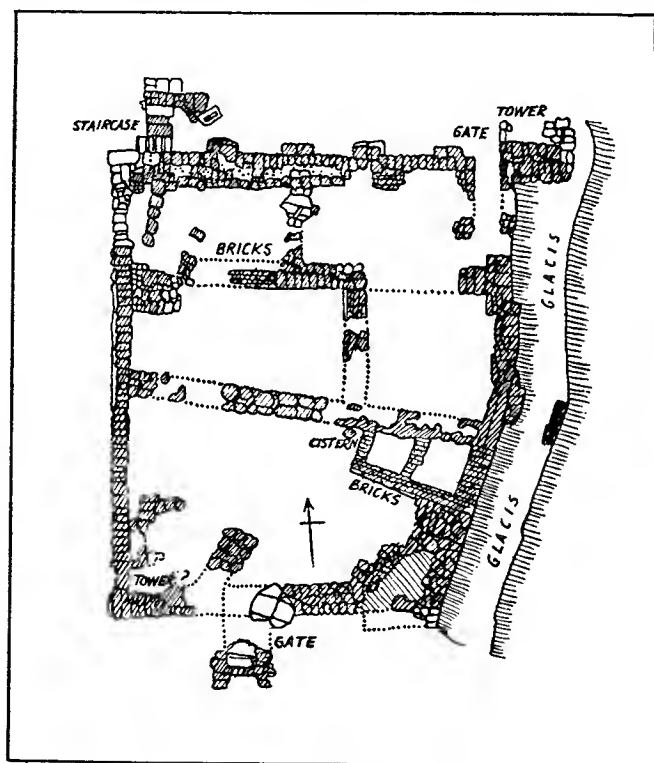


FIG. 27.—THE NORTH-EAST TOWER.

very hard limestone, laid in regular courses $17\frac{1}{2}$ to $21\frac{1}{2}$ inches deep, exactly as in the masonry of Solomon on the tower of Ophel. The walls are 5 to 6 feet thick, and consist of two well-built faces with mud and pebble filling between them. There are two gates, one on the north side, near the north-east corner, 5 feet wide, and the other on the south side.

Each corner of this construction is strengthened by a tower.

The best preserved at the north-east corner is 13 feet along its face, and projects 10 feet outside the wall. The tower at the south-west corner is altogether inside the wall. That at the south-east corner is mainly inside, but projects a little outside as well. The north-west tower seems to have vanished completely.

The north wall of this garrison fort is strengthened by equidistant small buttresses about 5 feet long, and with a projection of about 20 inches. There is one similar buttress on the east wall.

As in the west fort, the south gate is guarded by a small tower quite outside of the main building.

Masonry.—In the construction of the "tower" the materials of the Canaanite stone wall had been used, but the stones were squared and dressed. The masonry is the same as that attributed to Solomon at Gezer, Megiddo, and Zion.

Bricks and brick-built houses, as described elsewhere, were found in the earlier strata below this tower of Solomon.

The North-East Tower Outwork.—A short distance north of the north-east corner of this "tower," with access to it from the north gate, Solomon had thrown up another fine tower or outpost to be a further defence against attacks from the north. This is the finest bit of masonry on the site, and does not rest on any previous structure. It is a rectangular tower (32 by 24 feet) based on the rock, with offsets of 4 inches on its walls, as on the tower of Ophel and in the west fort. The courses are of dressed stones and regular. The corner-stones are carefully bonded. The walls had been strengthened at the base by a sloping glacis of pebbles and mud, as in the north-east tower.

The masonry is an excellent example of the style usually attributed to Solomon, and 1 Kings iv. 12 gives Ta'anach as being under the dominion of Solomon. The tower was built about 960 B.C.

Repair by Ahab or Jeroboam.—Some of the stones on the wall have a projecting boss in the centre, and are drafted at the edge. Masonry and stone-dressing of this type have been found at Shechem and Samaria, and seem to be characteristic of the builders of the northern kingdom. There is little doubt, therefore, that these stones are part of a repair by one of the kings of Northern Israel, Jeroboam or Ahab, after the kingdom was divided.

A SHOOTING GALLERY

A very interesting and unique feature of the "N.E. Tower" is the provision of loopholes in its north wall for shooting arrows or for the use of other engines of war, so that the garrison may fight an enemy attacking from the north, without unduly exposing themselves. On the western half of the wall the third course above the offset is replaced by a series of slabs or pillars, each 32 inches high, and set at intervals of 40 inches. This divided the wall into a series of breast-high slots. On each side of these slots, a partition wall ran toward the centre of the tower. The west one of these was traced for 32 feet. This part of the outwork was thus divided into a series of long corridors 40 inches wide, and in each was doubtless placed some engine of war, such as are referred to in 2 Chronicles xxvi. 15, Ezekiel xxvi. 9. There is a long corridor in the west fort, which probably indicates a similar arrangement. These corridors rest on the rock and are part of the original Solomonic construction.

The interior of this outwork was full of stone blocks, those at the north being massive in comparison with those at the southern side. Everything, in fact, shows that attack from the north was dreaded and most carefully provided against.

References to such "towers" or "outworks" in the Old Testament are found in Judges ix. 46, Zephaniah i. 16, and other passages. The "tower" of Shechem is a very interesting example. It must have been an outlook tower, so far away from the town itself that the garrison were unable to see what was going on in the city (Judg. ix. 46). It is described as a "hold" in verse 49, so that "the hold" of Zion in 2 Samuel v. 17 may be just such a tower within the city, known as Millo.

This "tower" outpost of Ta'anach was evidently connected with the north-east tower, probably by a walled passage, from its north gate. It was obviously built to strengthen the north-east tower, and the masonry shows that both were built at the same period—*i.e.*, by Solomon about 950 B.C.

Egyptian reliefs show that such outlying "towers" were used in Palestine and Syria as protections for the approach to walled cities. On a relief of Sennacherib's also, Lachish is depicted as having been strengthened by a similar outlying tower.

It should be noted that Sellin assigns this outwork to his latest stratum (800-500 B.C.) on account of the potsherds, many iron implements, and a very few flints found in it, but the earlier masonry appears to be Solomonic. If the outwork was wholly the work of Ahab, which would suit Sellin's date, we should expect the walls to be entirely of drafted masonry, like those of Samaria.

THE HISTORICAL TESTIMONY OF THE EXCAVATION

1. Ta'anach had a town and castle in Arab times, occupied by the Crusaders. It follows that Acre (Akka) on the west, Ta'anach in the centre, and Beisan on the east, formed a line of Crusader forts.

2. There was no settlement on Ta'anach mound in Roman times. It remained, as Hieronymus says, a country town on the east and south base of the mound, the mound itself being cultivated, as it is today. The same is true of Beisan and Ledschun mounds. Roman towns were built on the level ground, mounds being used only for forts. Ta'anach was not then needed for military purposes.

3. In the period of the real domination of Greek influence in Palestine, the mound of Ta'anach was not occupied. Seleucid ware, glass and houses, were entirely absent.

The town had been totally destroyed at a period before even the earliest Greek influence began to appear.

THE DESTRUCTION OF TA'ANACH

The Bible account would place this destruction at 722 by Shalmaneser.¹ Although only Samaria is named as being totally destroyed (2 Kings xvii. 6), and the surrounding towns as suffering by deportation to, and colonisation from, Babylonia, it is highly probable that Ta'anach was destroyed also. Sellin says if we know when the small polished yellowish-brown pots with the black concentric circles first appeared in Palestine, we may safely place the date of Ta'anach's fall within a century or two of that date.

We now know that these small pots appeared in the time of Rameses III, about 1194, and were common in the ninth

¹ Shalmaneser died during the siege of Samaria, and Sargon claimed the conquest.

century, so that Sellin's calculation would place it not later than 722. We know also that Greek influence appeared in the eighth century B.C., so that by this, his other dating-point, Ta'anach must have been destroyed in the eighth century, since no trace of Greek influence was found in it.

Isaiah at 720 B.C. already speaks of the small smelling-bottles of the ladies of Jerusalem (Isa. iii. 20), though we are not certain these were Greek work, and Joel iii. 6 speaks of the Greeks as slave-buyers in Palestine, but the early date of his book is disputed, though this may now be an argument for an earlier date.

The same scent-bottles have been found in Cyprus, but their age is not definitely known. They are really Cypriote oil flasks, and appear in Palestine from 1200-700 (XIX-XXIII Dynasties)¹.

Ohnefalsch-Richter dates his Phœnician-Greek period at 1000-600. Flinders Petrie dates the appearance of Greek influence in Palestine in the eighth century² from pottery found in Tell-el-Hesi, and more recently Gerar and Bethpelet. The evidence, therefore, is practically conclusive that the Old Testament account is correct and Ta'anach was destroyed, as the Old Testament states, at 722 B.C.

After 722 B.C. the next occasion for complete destruction would be the reign of Josiah of Judah (2 Kings xxiii. 19), and Pharaoh Necho's expedition against Babylon when in 608 B.C. he defeated and slew Josiah at Megiddo (2 Kings xxiii. 29). It is quite possible that the neighbouring Ta'anach might have been destroyed in this expedition by the Egyptians.

The Scythian invasion of 626 B.C. is another possible occasion, but both conflict with the arrival of Greek influence in Palestine.

Of the prehistoric inhabitants, no trace was found except empty caves.

The Amorites.—It is now, however, established that Ta'anach was first occupied by the people of that civilisation which took possession of Palestine prior to 2500 and bears the name of *Amorite*. Foreign influence is absent in this period.

Stratum 1a belongs to this period, 2500-2000 B.C. From 2000 foreign influences make themselves felt—Ægean, Hittite or "Hyksos," Babylonian, and Egyptian.

¹ See *Corpus of Palestinian Pottery*, 82-84.

² *Tell-el-Hesi*, p. 48.

The west tower gave evidence of the presence of Thothmes III about 1500 B.C. The scarab found in it leads us straight to that date. The original fort had been destroyed by Thothmes III, perhaps, and later rebuilt by Solomon.

NOTE.—Whether Sellin uses the word Phœnician here in the sense of Philistine, or more widely to include Ægean or Western influence generally, I cannot make out; but Philistine ware appears as early as 1300 B.C., and Ægean as early as 1600. The Philistines had reached Ta'anach by 1050, for about that date they defeated Saul at Gilboa. The appearance of "Phœnician" ware at Ta'anach therefore is not much help in dating its destruction. Elsewhere he makes it depend on the appearance of "Greek" influence in Palestine.

EXTENT OF SOLOMON'S KINGDOM: ISRAELITE OCCUPATION OF TA'ANACH

The excavation shows that the Israelite occupation of Ta'anach was complete in the time of Solomon. There is no marked break in the civilisation, but the Amorite walls had been overthrown.

Sellin makes nothing of the brick houses found above the ruins of the ancient brick wall, which I think may mark the period of the Judges. The early structure under the west tower must have suffered destruction. He attributes this to the Khabiri or to Thothmes III, but these brick houses found in the north-east tower must mark a period of squatter or village occupation, after the destruction of a wall or fort on that spot, and that older wall or fort must be of the same period as the west fort. Probably the fortifications of the town were destroyed by the Khabiri, or Thothmes III, or by the Israelites themselves (if they are not the Khabiri), and these brick houses on the north-east fort ruins may mark an Israelite settlement in the period of the Judges, say between 1300 and 1100 B.C. Then, by 960, Solomon must have re fortified Ta'anach to some extent, if only by erecting these three "towers" to hold a defensive garrison against invasion from the north.

This completely accords with the Old Testament statement that Solomon's empire extended as far as Tadmor (Palmyra), and included Hamath, the region of Damascus and Kadesh the capital of the Hittites. With these outposts further north it was not necessary for him to fully fortify Megiddo and Ta'anach. Garrison forts were sufficient, and that is exactly what we find (see 1 Kings ix. 17, etc.; 2 Chron. viii. 4, etc.).

GIBEAH OF BENJAMIN IN THE OLD TESTAMENT¹

The name occurs in the Old Testament in the various forms Gibeah, Gibeath, Geba, and Gaba. In Joshua xviii. 28 it is mentioned as part of the inheritance of Benjamin. There is no record of its being taken from the Canaanites. In the text it is located always as near to Ramah and Mizpah, and in the vicinity of Bethel. It figures in the disreputable incident narrated in Judges xix.-xx. In the period of the Judges and Saul it plays a part in the wars with the Philistines, and had evidently been held by them, as 1 Samuel xiii. 3, 16 implies. Thereafter it became the headquarters of King Saul, who had his residence there, and is frequently referred to as Gibeah of Saul (1 Sam. x. 26, xi. 4, xv. 34, etc.) Compare also 1 Samuel xiii. 2, 3; 15; 16. In 2 Samuel xxiii. 29 one of David's thirty captains, Ribai, is mentioned as coming from Gibeah.

The fort plays a part also in the wars of David with the Philistines (2 Sam. v. 25). In the time of Asa (c. 940) the walls must have fallen into disrepair, for we learn from 1 Kings xv. 22 (2 Chron. xvi. 6) that he rebuilt it, at the same time as he rebuilt Mizpah, with materials taken from Ramah, in anticipation of the attack of Baasha, King of Israel (see Jer. xli. 9). In Ezra ii. 26 and Nehemiah vii. 30 the name appears as Gaba. In Nehemiah xi. 31, xii. 29, Isaiah x. 29, Zechariah xiv. 10 it is named Geba, and is there referred to as a village in the district round Jerusalem.

Dr. Albright has identified Gibeah with the site known now as Tell-el-Fûl, which he has excavated, situated about four miles N. of Jerusalem, and quite within view. It is a likely position for Gibeah. He says, however, that not a sherd of pottery was found in it which could be regarded as Bronze Age ware, and consequently the earliest fortress on Tell-el-Fûl cannot date before 1200 B.C. This means that the place was never fortified by the Canaanites, yet it is admitted that Gibeah was occupied in the period of the Judges. If the occupants were not Canaanites, they must have been Philistines. Albright found also that the earliest fortress on Tell-el-Fûl had been burned down at a time which would fit in exactly with the destruction recorded in Judges xx. He finds also that his other discoveries fit in well with the

¹ For illustration see "Towers" in *The Accuracy of the Old Testament*.

Old Testament narrative, but no Philistine pottery was found on Tell-el-Fûl, yet the Old Testament narrative implies that the Philistines occupied Gibeah, and were evidently anxious to retain it throughout the period of the Kings.

TELL-EL-FÛL—GIBEAH

Tell-el-Fûl contained four fortresses of different periods. In the excavations Dr. Albright found "not a single clear Bronze Age type" of pottery. On this account he has assigned the earliest fortress walls uncovered in the lowest stratum of occupation to the close of the III Bronze Age period, near the end of the thirteenth century B.C. Gibeah cannot, therefore, be classed as an early Canaanite fortification. It belongs to the period of Hebrew conquest and later Hebrew occupation. The walls of this earliest fortress were of the usual Cyclopean style of masonry, common in all Canaanite forts. They are massive, and the stones used are large polygonal blocks. This fortress had two stories, as proved "by the layer of ashes representing woodwork between its remains and the foundation of the second fortress." The ashes vary in depth from 2 to 12 inches, and the wood used had been cypress and pine, trees which have been extinct in that region for many centuries. It had been built about 1200 B.C., and was burned down between 1150 and 1100, which fits in well with the destruction of Gibeah recorded in Judges xx., and is regarded by Albright as confirmation of that passage in the Old Testament. The structure measured roughly 60 feet by 40 feet, so that it appears to have been quite a small fort of the nature of a garrison fort.

The second fortress Albright attributes to Saul and regards as his headquarters. It cannot, on this assumption, date earlier than 1030 B.C. It is the most elaborate and best constructed of all four. Its occupation is marked by a distinct advance in the quality of the pottery, painted and finely burnished ware appearing in great quantities. Like the first, it was a two-storey building with a massive staircase of stone leading to the upper storey. In this staircase the steps measured about 40 inches long, and the depth of each step is 9 inches. The wall of the fort was only $6\frac{1}{2}$ to $7\frac{1}{2}$ feet thick. A long passage about 40 inches wide led into the first storey. This ended in a door 34 inches wide, which

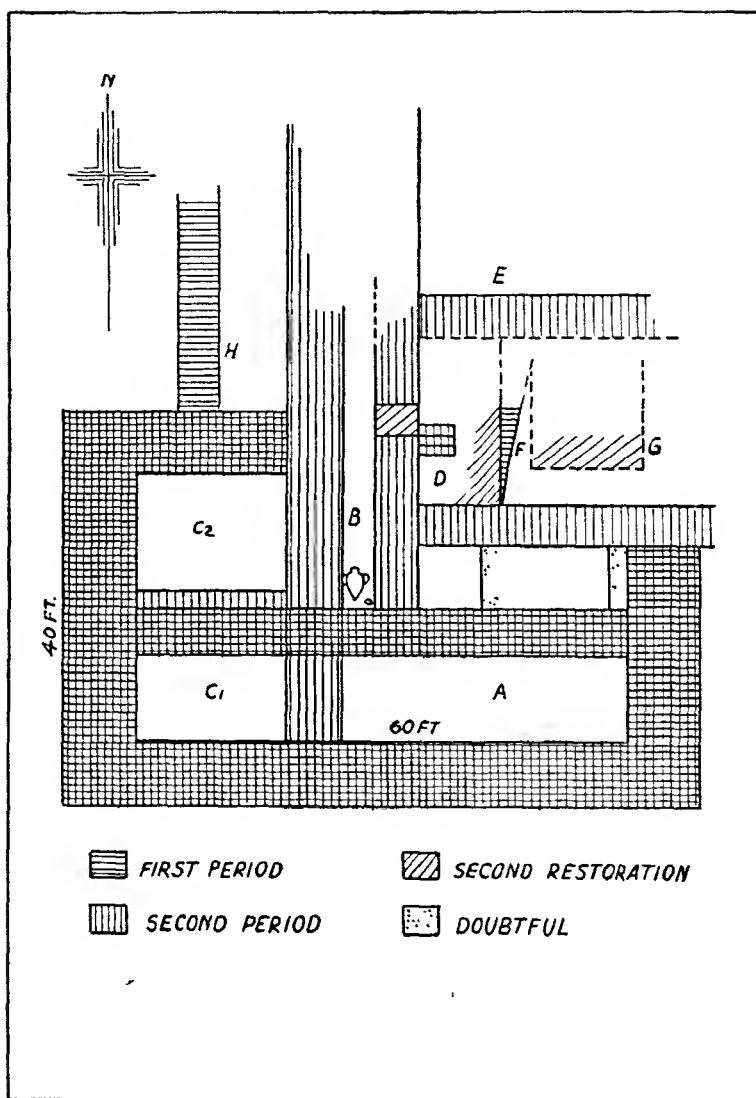


FIG. 28.—GIBEAH FORTRESSES I AND II.

opened on to the staircase. An interesting feature is the series of slots in the walls for lighting the lower rooms or cellars of the fortress, perhaps also for defensive purposes. Of these openings some are square, others triangular. They measure 8 to 10 inches broad and 14 to 20 inches high. With these we may compare the windows in the gate-chambers of Ezekiel xl. 16. This fortress was as large as the first, or perhaps a little larger. The large quantity of pottery found includes the types usually attributed to the early Hebrew period from 1100-900.

These two fortresses were really the citadels of a small town, but no town walls are recorded.

Fortress III is quite different in plan and construction. It dates from the ninth to seventh century, and had been merely an outpost or watch-tower (Migdal). This fortress is quadrangular, and may be regarded as the typical tower of the Old Testament, the typical Palestinian fortress which we find depicted on Egyptian monuments, as, *e.g.*, on the reliefs of Set I at Karnak.¹ Near Ruheibeh, the ancient Rehoboth, a fort of this type was found by Woolley and Lawrence. It is roughly 66½ feet square. The fine black polished ware characteristic of the period 1000-700 was found in it, as also in this Fortress III of Gibeah, showing that both belong to the same period. Both were simply garrison stations, probably for the protection of sheep and shepherds against marauders from the south, as well as watch-towers or revenue outposts. This third fortress of Gibeah was, however, strengthened with a glacis all round, and so far no other fort of this size is known to have had such additional strength. Undoubtedly Gibeah had to serve as a protective outpost for Jerusalem. The fortress has an inner and a thinner outer wall. The glacis is laid against this thin outer wall, and enveloped the whole fortress. The inner wall is built on the south and east sides upon the ruins of the walls of two earlier fortresses, but on the west and north sides they practically missed these remains, and compensated the north wall for its want of solid foundation by increased thickness. The glacis rested on a foundation of larger stones, with a vertical face 24 to 28 inches high. The glacis sloped at an angle of about 60°, and rose to a height of

¹ For illustration see *The Accuracy of the O.T.* (by the author), under "Towers"; or Petrie, *Egypt and Israel*, p. 52, Fig. 23. For other examples see also Woolley and Lawrence, *P.E.F. Annual* III, pp. 41-43.

18½ feet in the third fortress, and 15 feet in the fourth fortress.

It closely resembles the glaces at Jericho and at Gezer.

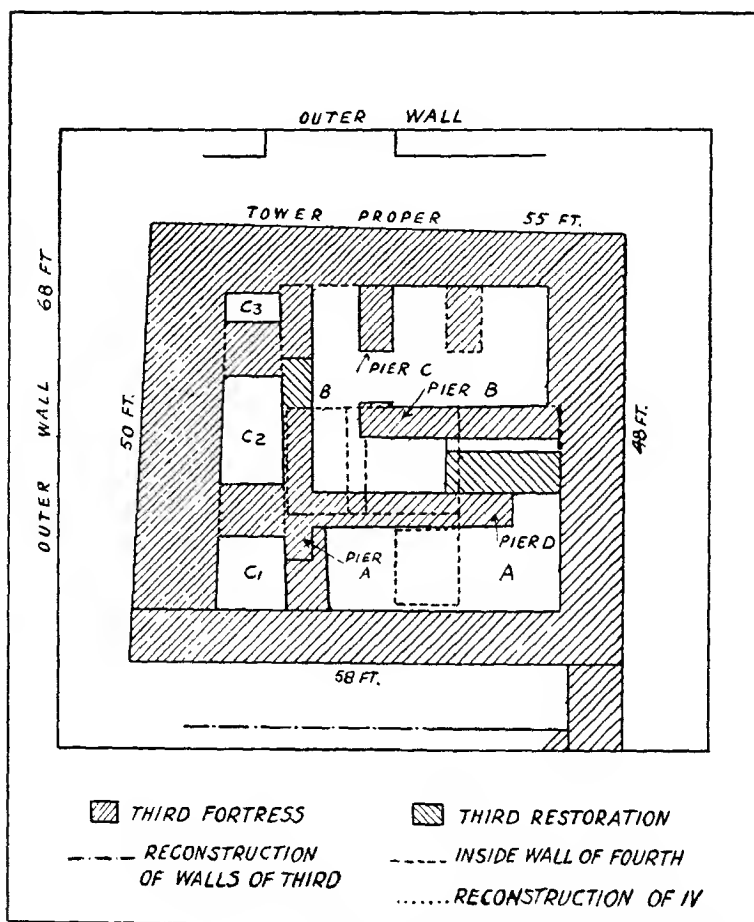


FIG. 29.—GIBEAH FORTRESSES III AND IV.

The fortress measures roughly 75 feet W. to E. and 68 feet N. to S. by the measurements of the outer wall. The fortress proper enclosed by the inner wall was irregular in shape, its S. and N. sides measuring 58 and 55 feet, and its E. and W.

sides 48 and 50 feet. The space between the walls was only $6\frac{1}{2}$ feet. Everything points to its walls having been run up in great haste, and wood had been used in great quantity as shown by the effect of the fire that destroyed it upon the stones of the walls. The charred remains showed that almond trees had been used, not the cypress and pine of the earlier period, which probably means that these coniferous trees had disappeared by this date. It is significant also when we recall that Asa brought wood and stones from Baasha's fortress, Ramah, to rebuild Gibeah. The stones used resemble the masonry of Solomon and Ahab of Samaria, in size, shape, and dressing.

Two vertical drains were found on the N. side between the walls for carrying off rain water, each with an inside diameter of 22 to 24 inches. These are circular or polygonal, and are unique in this respect.

This fortress had been partially destroyed and rebuilt at least once, probably by Uzziah. The pottery is inferior to that of Fortress II stratum, and dates from 900-700. The ring-burnished ware is an outstanding feature, and of this ware Albright says: "It cannot be sufficiently emphasised that ring-burnished ware belongs exclusively to the Early Iron Age (*i.e.*, 1000-600): nowhere in Palestine do we find specimens from the Bronze Age." The writer found abundant examples of this wheel-burnished ware in ancient Zion, which was assigned to that period, but at Tell Fara last winter Petrie found ring-burnished ware, burnished on the wheel, in Hyksos tombs, which he has assigned accordingly to the Middle Bronze Age. It should be noted also that since Albright wrote 1000-600 is now the Middle Iron Age, while 1300-1000 is the Early Iron Age. The evidence leaves little doubt that this third fortress is the work of Asa referred to in 1 Kings xv. 22. It was destroyed, probably in the Syro-Ephraimitic war, a generation after Uzziah rebuilt it—*i.e.*, in the eighth century B.C.

Between the destruction of Fortress III and the building of Fortress IV, several centuries elapsed. This last structure followed the lines of the walls of its predecessor, and the glacis was repaired and reused, being about $3\frac{1}{2}$ feet lower. The old materials were used throughout. In the interior of the fortress, however, the old foundations of dividing walls were ignored, and a new arrangement substituted. The cellars were filled with debris to form a platform on which the

watch-tower proper was built. The pottery was all of the Seleucid period (after 300 B.C.), and fragments of glass were found. The fortress was still used as a watch-tower for the defence of Jerusalem, and had been built in the early period of the Maccabees, probably about 160 B.C. Walls of a village settlement were found all round the tower, showing that the need for a fortress soon became no longer necessary. The fact that no Roman or Byzantine sherds were found on the site shows that Gibeah was abandoned from the first century A.D.

Among the pottery unearthed in the excavation of Tell-el-Fûl not a scrap was found that could be described as Philistine. It is all Hebrew ware. There is no evidence of a Philistine occupation. If Tell-el-Fûl is Gibeah, therefore, the passage 1 Samuel xiii. 3, which states that "Jonathan smote the garrison of the Philistines that was in Geba," cannot be taken to mean that the Philistines were actually in occupation of Gibeah, but simply that they were encamped near it.

One cannot help feeling that, if Gibeah was found so important an outpost of Jerusalem, these centuries when it remained unoccupied and in ruins are at least disconcerting, and 1 Samuel xiii. 3 and 16 certainly seem to mean that Saul and Jonathan smote the Philistine garrison in Gibeah and afterwards made it their headquarters. Dr. Albright does not deal with this passage. He, however, suggests that after the Gilboa defeat the Philistines had sacked Gibeah, but did not destroy it. According to Albright there is a gap in the occupation of Tell-el-Fûl of 100 years after the death of Saul, and a similar gap between the destruction of Fortress I and the building of Fortress II by Saul. It is this earliest gap in the occupation of Gibeah between 1125 and 1050 B.C. that may very probably have been filled by a Philistine occupation, which would satisfy the passage 1 Samuel xiii. 3. If that verse implies a Philistine occupation of Gibeah, Tell-el-Fûl cannot be Gibeah, and some other site must be found for it.

Tell-el-Fûl is interesting and valuable as supplying us with two of the finest examples of the typical Old Testament towers which we possess, and showing us how accurately the Egyptian sculptors reproduced them.

JERUSALEM

THE EASTERN WALL OF THE CITY OF DAVID

This wall has been uncovered for a length of nearly 400 feet on the eastern edge of Fields 5, 7, and 9 of the Government Plan. The original wall belongs to the Jebusite period, and rests on the rock, which is scarped where necessary. As it stands, it contains masonry of several periods, for it continued to be the east wall of Zion till Ophel was excluded from the city. For the reason that the most interesting part of its history is the Hebrew period, I have chosen to describe it under Hebrew Fortifications, and exactly as I found it.

At the northern end of Field 5 the Jebusite wall must have been broken down or threatened to give way. To strengthen it, a small tower (measuring 18 feet long, projecting 4 feet at north, and 10 feet at south end) was added to the face of it in early Maccabean times. The debris in front of this small tower or buttress disclosed an interesting stratification, which enabled us to assign the tower to the Maccabean age, without doubt (150-50 B.C.).

Before proceeding to build the tower, the workmen cut a trench of the necessary width, throwing the material out beyond the required breadth of the tower. In doing so, they necessarily inverted the order of the pottery among the debris.

Thus, the oldest pottery was found on the top and the later pottery beneath it.

The first 6 feet of debris contained Arab and Roman sherds. At 8 feet we found Maccabean sherds in abundance. From 8 feet depth down to 18 feet, I found scraps of Neolithic, I, II, and III Bronze Age pottery, and mixed with the III Bronze Age an abundance of Hebrew potsherds of various periods. Below these again, I found Maccabean sherds, and thereafter the stratification resumed its normal sequence.

It is thus clear that Israelites of the Maccabean Age occupied the site before this tower was made, and they were the first to throw broken pottery over the wall after the tower was built.

These facts leave no doubt that the Maccabeans were responsible for the inversion of the order of the stratification. They are, therefore, the builders of the tower.

The Masonry.

This small tower rests partly on debris, but the debris between it and the rock scarp is only 2 feet wide and 2 feet deep. The main bulk of the tower, therefore, has the support of the rock scarp, and the Jebusite wall here stands several feet inwards from the face of the scarp.

The masonry consists of small blocks of irregular shape, many of them triangular and just as the hammer produced them, when the builders broke up larger blocks which had belonged to some part of the original Jebusite wall. None of them are squared or dressed. All are hammer-shaped, simply. The interstices are very roughly filled up with the chips and large quantities of mortar. It is unquestionably a hurried repair.

The tower also joins the face of the original wall by a *straight* joint. It is not bonded.

Between this tower and the north step bastion there are five or six courses of the same masonry on the top of the original Jebusite wall. This also must be a repair by the Maccabees, the wall having been broken down in a siege, perhaps by Antiochus.

The North Stair Bastion.

On this section of the east wall, beginning just under the south wall of the above tower and continuing down to the south boundary of Field 7, the rock surface recedes westwards, so that the outer face of the city wall had little, if any, grip of it. To support the foundations of the wall, therefore, the builders threw up three great bastions, one at the north end, one at the middle, and one at the south end of the section. This I discovered from examination of a small cave under the rock which supports the small Maccabean tower. This cave is filled up with great roughly quarried boulders of limestone, as far inwards as I could see, and for a considerable distance under the foundations of the Jebusite wall. The boulders of the bastion in the same way underlay the wall and served as its foundations. These boulders were doubtless also intended to shore up the roof of the cave on which the city wall partly rested.

The north and south bastions are rounded glaces resembling



ZION EAST WALL THE NORTH STEP BASTION AND THE DAVIDIC TOWER



THE DAVID TOWER (ZION) SHOWING THE LINE OF THE JERUSALEM GLASS. (JERUSALEM FORTIFICATIONS)

that found on the west wall of Jericho in similar conditions. They consist of massive blocks of limestone thrown against and under the rock face beneath the wall. The north bastion rises to a vertical height of 23 feet level with the wall as we found it, and at the depth of my excavation its projection from the wall is about 15 feet. At its uppermost point this glacis is only about 28 feet from N. to S., but as it descends it extends in an ever widening circular sweep till it covers over 70 feet of the face of the wall. With the blocks, smaller stones and earth were mixed to bind the mass. Its surface was carefully worked into a series of about twenty-three steps, giving the bastion the appearance of a great stair entrance to the fort.

The blocks are all hammer-shaped. Those in the under-filling are of enormous size and no time has been wasted in dressing them. Those used to form the steps, however, are more carefully shaped. They have at least two flat sides to serve as the surface and face of the step, and they are carefully chosen and placed, so that in each step they are of uniform size. The steps, however, vary in depth from 8 to 15 inches or more.

The northern half is complete and presents a fine appearance. At the south end the bastion has been broken up in a siege (perhaps at A.D. 70), and there are 10 feet of confused masonry, followed by 10 feet more where the blocks have almost completely disappeared and the space is filled with rubbish thrown from inside the city.

The southern limit of the north stair bastion abuts on the northern edge of a massive sloping glacis, of the same material but without steps. This glacis had measured about 45 to 50 feet in length, and its maximum projection from the wall at its base was considerably over 20 feet. It had been built by the Amorites to serve the same purpose as the bastions, and its sloping face and sides had been thickly coated with lime-mud plaster. It closely resembles the plastered glacis face of the sand-ramparts built by the Hyksos at Avaris (Tell-el-Yahudiyeh) in Egypt, and these sloping earth-mounds or glaces may be taken as evidence of Hittite or Hyksos influence wherever they are found.

The Tower "that lieth out" (Neb. iii. 26).

The Hebrews, however, like the Amorites, seem to have had a predilection for towers. When David took the stronghold, he cut off part of the face of this glacis at the base, making its face perpendicular, and completed it as a massive tower of the Syro-Egyptian type. He did so without obliterating the sloping line of the original face of the glacis, so that it is traceable both inside and outside the north wall of the tower. He left the masonry exactly as it was, except on the new front which he added.

The walls of the tower were 8 feet thick on the north and south sides, but 16 feet in front. Originally, the front wall had been only 8 feet, but very soon a wall of the same thickness was added inside behind it. Like the other walls of the city, they are "filling" walls, the core consisting of smaller stones thrown in with earth or mortar.

It is clear from this that the tower had been assailed and battered in from the front and the wall had been doubled in consequence.

This tower is 57 feet along its face, projects 18 feet from the wall at the north end, and 30 feet along its upper courses at the south end.

This difference of projection shows clearly that the wall here had a bend or "turning" westwards at that point, owing to the rock surface receding, and this section of the east wall is, I think, the bend, or "turning of the wall" referred to in the passage of Nehemiah iii. 25.

The original glacis face rested on accumulated debris, but trenches had been cut, and five rude walls, 5 feet wide, at almost regular intervals along its face, had been built in to prevent the weight of the tower causing the debris on the slope to slip. The intervening spaces between these walls were filled with packed earth and lumps of stone. This may have been the original foundation built by the Jebusites, and reused by David. It is more likely that these foundations are the work of David, especially as the tower face is longer than the glacis face and the foundations extend to the extreme length of the tower.

The tower itself stands to a height of 20 feet, and the foundations added other 12 feet approximately. When complete it would thus have been over 30 feet high.

In building this tower, David had largely used the material

of the glacis. The masonry on its face is composed of the same blocks, but they appear to have been more carefully selected, and to some extent dressed, so as to present a more or less even, though by no means smooth, surface. The surface had, however, been well covered with plaster to remove all unevenness. There is a series of offsets, each 4 inches deep, at varying distances on the face of the tower, as found at Megiddo, Jericho and elsewhere, and one such offset on the southern face.

Solomonic Repair (1 Kings ix. 15 ; xi. 27)

The tower had suffered demolition at the northern corner, and for some distance southwards. This had been repaired with a totally different class of masonry. Some eight courses of this masonry remained at the level of the tower as I found it. The repair, however, must have continued to the original height of the tower, perhaps 20 feet more, and must thus have measured about 30 feet in height. The tower must have stood unfinished or met with great disaster soon after David constructed it, probably in an attack by the Philistines.

The masonry of the repair is the same as the Solomonic masonry found at Gezer, Megiddo, and Ta'anach. The stones are well squared, dressed obliquely with a $\frac{5}{8}$ inch wide chisel, and the corners are carefully bonded. Some of the blocks were 3 feet long, 14 inches deep, and 12 inches thick. Others are larger. The courses are regular, though not all of the same depth.

This seems to be one of the repairs carried out by Solomon on the walls of the city of David his father, as narrated in 1 Kings ix. 15, where it is stated that he raised a levy among other objects to "build the wall of Jerusalem and Hazor and Megiddo and Gezer." It is practically a safe inference, since this class of masonry and stone dressing is the only masonry common to Gezer, Megiddo, Ta'anach, and Zion, and so far has been found nowhere else.

Below these eight courses of Solomonic masonry the masonry of the tower face is different in character. There are no dressed stones, and the surface is plentifully covered with lime-mud plaster. The plaster may, however, be the work of Hezekiah.

Later Repairs: Hezekiah or Nehemiah (2 Chron. xxxii. 5)

At two points on the face of the tower the masonry of Solomon had been replaced by masonry that has been thrown in in a very hurried manner.

The stones are small, undressed, ill-shaped, and unequal. Some of them are absurdly small and seem to be mere splinters broken off larger blocks, just as if they used any sort of material that lay to hand. The large gaps and interstices are filled with a liberal amount of mud-plaster mixed with small chips of stone.

These appear to be later repairs in the face of some great emergency, such as an enemy pressing near.

No attempt was made to restore the broken line of the offset, and the masonry is brought out so as to be flush with it. The offset thus vanishes at one side of the repair and reappears at the other. These repairs may mark the hurried preparation of Hezekiah for the coming of Sennacherib in 701 B.C., or they may be the work of Nehemiah. Nehemiah, however, mentions no repairs on the "tower that lieth out" (Neh. iii.).

In the interior of the tower there were the usual "rooms" or empty spaces measuring about 10 feet each way. These, however, showed no trace of a door. If they were used, they could have been entered and lighted only from the top, a feature which is common to most of these tower-rooms in Palestinian forts. The destruction, however, was usually so complete, that it is impossible to be definite on this point, and the tower may very well have been the armoury of David.

Behind the small rooms the tower is filled up with great boulders of fallen masonry lying in their courses. These are simply the walls of the tower itself, which have been battered down and fallen inwards. As the Department of Antiquities wished the tower to be left as it stands, it was impossible to excavate the interior in order to discover whether this tower had been built to close up an ancient water-gate or not.

It is possible that the Jebusite water-gate passed through the glacis, and that David converted the glacis into a tower to close it up, since the water was already brought inside the city by the short tunnel, vertical shaft, and sloping underground passage (known as Warren's Shaft); but this water-gate must have passed through the sloping glacis at its centre, and the stair bastions could hardly be said to have been built to protect such a gate.¹

¹ See *P.E.F. Annual* IV, p. 60.

Date of the Tower : David the Original Builder.

The south end of the tower rests on the steps of the south step bastion, and overlaps the bastion for some distance. The bastion had originally abutted on the south edge of the sloping glacis, as at the north. The tower is, therefore, larger than the glacis, and overlaps it also. This explains why the slope of the glacis is not traceable on the south wall of the tower, and why there is an offset on the south, but no offset on the north side of the tower. It follows that the tower is a later construction than the bastions and the glacis. The Solomonic repair on the upper part of it proves that it is earlier than Solomon's time, the masonry below the repair being quite different.

In the stratum under the foundations of the tower, I was careful to secure all the potsherds, and these are all of the earliest Hebrew period, dating about 1000 B.C.

The tower was, therefore, constructed about that time, just after David captured the stronghold. Below that pottery, the stratification was regular, and contained sherds of the Bronze Age and Neolithic periods.

The South Stair Bastion.

The south stair bastion occupies the whole eastern edge of Field 7. This bastion goes deeper into the debris of the slope, and its steps are slightly steeper, otherwise it is a duplicate of the north stair bastion: but the south wall of the tower rests upon the northern end and has cut off a section of it, so that the bastion does not enter the corner of the tower, as the north bastion does.

This bastion sweeps round to the south-east, till at the junction of Field 7 and Field 9, almost vertically above the mouth of the great cave, it joins the original Jebusite wall standing on the rock scarp, which at that point reappears.

This confirms my observation made above as to the reason why these bastions were made. They were intended to shore up the main wall at points where the rock receded westwards, so that the wall might continue on its line without closely following the eccentricities of the rock.

The face of the south bastion had been broken by the insertion of a plastered cistern of the late Arab (crusading) period. Part of the lower portion was removed by Dr.

Macalister to elucidate certain points. As a result, we found that while the back of the bastion is composed only of massive blocks of stone, the face contains a good admixture of earth and filling, and the steps are bedded in it.

This appears to hold true also of the north stair bastion.

The Tower that Lieth Out : The Stairs of the City of David : The Turning of the Wall : The King's High House : The House of the Heroes : The Armoury and Millo (Neh. iii.).

This whole section of the wall has been made a national monument by the Department of Antiquities, and put into a state of preservation. It is the oldest masonry yet discovered in or around Jerusalem.

It presents a striking appearance as it stands with the slope of the Kidron Valley completely cut away, thus leaving it exposed once more as it stood in the days of David and Solomon : and as it appeared to the Rabshakeh of Sennacherib when he came with his insulting message to Hezekiah and the people of Israel in 701 B.C. (2 Kings xviii.).

As we look on it we cannot but think of the stairs of the city of David, and in one chapter of Nehemiah (xii. 37) the words "stairs of the city of David" seem to me to refer to these stair bastions.

As Jewish authorities, as well as others, are agreed that Nehemiah iii. does not detail the various repairs executed in their exact order of local sequence, it is quite likely that the expression refers to these stair bastions. The "going up of the wall," the "house of David," and the "water-gate" mentioned in juxtaposition confirm this.

The other expression "*the turning of the wall*" almost certainly refers to this section of the eastern wall (Neh. iii. 25). It sweeps in a marked curve from the small Maccabean tower round the great tower built by David, and recedes again westward to the southern edge of the south stair bastion, so that one can easily picture in one's mind how prominently this curved part of the wall stood out and first caught the eye of the visitor as he descended towards the city of David.

There is no doubt also that this great tower is the "*tower that lieth out*" of Nehemiah iii. 26. There is only one other point that would fit the narrative, but it is much too far down the eastern side to be so strikingly prominent as this tower must

have been. That point is the eastern projection of the rock overhanging the king's gardens, just above the northern extremity of M. Weil's excavations.

This is the only other point on the eastern wall which could be identified with the "turning of the wall" (Neh. iii. 19), and where might have stood a "tower that lieth out" (Neh. iii. 25).

There are two "turnings of the wall" mentioned—namely, Nehemiah iii. 19 and iii. 24. It seems to me that verse 19 refers to the corner just above M. Weil's excavations. In Nehemiah iii. 25, however, where it seems from the narrative to be some distance further north, the "turning of the wall" is associated with a "tower that lieth out." This must refer to the two stair bastions, with the tower between them, described above. These identifications of Nehemiah's topography of the eastern wall are practically certain.

The "armoury" in Nehemiah iii. 19 seems associated with the southernmost "turning": and probably ought to be found there. It is a very suitable position, and the steps that led up to it may yet be found. Strategically, the tower would be a more suitable identification. The "going up of the corner" (verse 21) refers to the "turning" still further north, which was discovered in previous excavation of the eastern wall, a little south from the temple site.

Somewhere near this great tower, inside the city, must have stood the king's high house, and the house of heroes.

All trace of buildings earlier than Roman have almost vanished inside the city: but it is just possible that the long Davidic wall in Field 5 was really part of the King's high house, or palace and treasury of David.

I have found it completely impossible to connect Dr. Macalister's Millo with these massive eastern fortifications: but I am quite convinced that these massive bastions and tower were part of the real Millo, which must have been a citadel defending the northern end of the city.

The Jebusite Wall in Field 9.

Just where the Jebusite wall leaves Field 7 at the south end of the south stair bastion, the rock surface reappears with the Jebusite wall upon it, and again in Field 9 we pick them up, right above the entrance to the Great Cave I.

At this point the rock is only 14 feet under the present surface level.

The scarped face itself is 10 feet deep to the upper edge of the cave mouth, and the distance to the level of the cave floor is about 6 feet, making in all about 30 feet down to the cave floor level.

As the rock is so near to the surface we naturally expect to find little of the original wall left. Traces of several courses remain, and on the top of these there are walls of houses built by the Arabs. Twenty feet length of these courses are *in situ*, but at that point the outer face of the Jebusite wall has been completely pushed out into the space between the walls to allow the passage of an Arab street. Three courses were found lying as they fell under the face of the scarp.

Another Solomonic Repair.

These three courses consist of large blocks, similar in size to the Solomonic blocks on the great tower and having the same dressing with a $\frac{5}{8}$ -inch chisel. At this point, therefore, there had been another Solomonic repair on the Jebusite wall. On examination I later found a Solomonic block *in situ*. It is part of this Solomonic repair and rests on the rock, showing that at this point the wall had been badly ruined in David's or Solomon's time.

On the south side of this Arab street, which is only $12\frac{1}{2}$ feet wide, is another Arab house, and under this house the Jebusite wall reappears with a late Arab cistern built on the face of it. For 10 feet the three lowest courses of the wall remain, and for the next 5 feet a depth of twelve courses remains. These twelve courses fill up a cleft or break in the face of the scarp, and at this point the sewer passes through the wall, demolishing it. Thus we have about 50 feet length of the Jebusite wall *in situ* in Field 9 as far as the sewer.

A Davidic Repair.

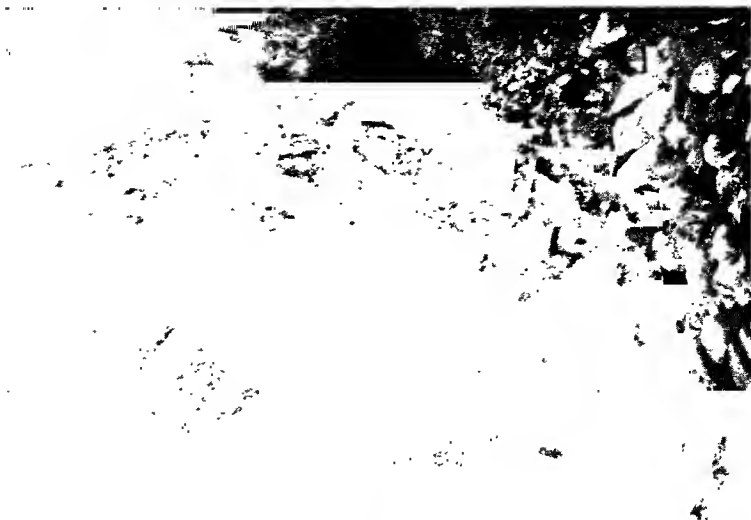
South of the sewer traces of Jebusite masonry reappeared resting on the scarp, which goes 10 to 12 feet deeper at this point. These traces carried the wall for about $18\frac{1}{2}$ feet, at which point a repair of very fine masonry, which I think is Davidic, takes the place of the old Jebusite wall. This repair



HEBREW FORTIFICATIONS.

THE LONG DAVIDIC WALL IN ANCIENT ZION WITH BYZANTINE PLASTER OF HOUSES BUILT ON TO IT.

facing p. 108.



ZION ROCK CHAMBER BETWEEN THE WALLS



ZION—DAVIDIC REPAIR ON JERUSALEM WALL (RIGHT)
GREEK WALL (LEFT) SHOWING STRATIFICATION.

is 22 feet in length. At 10½ feet there is a vertical offset or corner of 6 inches projection, and the wall continues for 11½ feet more, where it disappears into the bank and continues through Field 11, serving as north wall of the courtyard and byre of a house that rests upon it. This Davidic repair rests on the rock and is 18 feet in height.

Masonry.—The masonry consists of small polygonal blocks, which leave interstices of some size. These interstices are filled up with chips and mortar in such a way as to leave a pleasing effect of regularity. It is good masonry, and the corners show careful building.

There is a marked difference between the masonry of this repair and the masonry of the outer wall described later.

Weep-hole.—In the first section of it, too, there was a small square opening evidently intended to serve as a weep-hole for drainage. It measured about 18 inches square.

The courses were regular and the stones laid one upon two. At the corners also, the same care was shown as we find in the Solomonic masonry at the north corner of the great tower.

This Davidic repair is the outer face of a "filling" wall or rampart, similar to the Jebusite wall of which it is part.

Breaches in the Wall.

On this point, Isaiah xxx. 13 is very interesting.

"Therefore this iniquity shall be to you as a breach ready to fall, swelling out in a high wall, whose breaking cometh suddenly at an instant." A bulge, or swelling, in the city wall, ready to fall out without warning, was obviously a familiar experience, just as we should expect in the case of "millo" or filling walls not provided with weep-holes. It may be that Isaiah had this massive eastern Jebusite wall of the city of David in his mind when he wrote these words.

At least, the passage makes it quite clear that breaches and disintegrations of the city walls were not always the result of attacks by an outside enemy, but were caused by accumulation of water in the filling, and by pressure of the filling itself.

Many of the repairs executed on the walls by Hezekiah in preparation for the attack of Sennacherib, and by other kings as mentioned in the Old Testament, were probably due to such disintegration. It must have been a constant danger, and this

section of the east wall seems to have been peculiarly liable to such accidents, for we find repairs on its outer face by both David and Solomon, and curiously, the outer wall of Hezekiah, though provided with at least one weep-hole, has itself a great bulge on its face.

The Jebusite masonry was mostly of a very open nature, but the interstices were filled up with chips and mortar, and no weep-holes were left. It is significant, therefore, that we find weep-holes both in the Davidic repair and in the outer wall of Hezekiah. The Jebusites used a large mixture of stones in the filling, which facilitated drainage. In Hezekiah's outer wall the filling was chiefly debris, as if hurried.

The Date of the Eastern Wall.

The inner or Jebusite wall dates prior to the seizure of the Jebusite fortress by David and the Israelites, or somewhere between 2000 and 1600 B.C. The following considerations bear upon this :

1. In the mortar in the north stair bastion I found red burnished ware of the II Bronze Age, about 2000-1600.

2. At the base of the south stair bastion red burnished and painted ware of the Early Bronze Age was found in the debris (2500-2000).

3. On the outer face of the wall, where we have been able to get down to undisturbed stratification at its foundation, the pottery indicates that this wall dates somewhere between 2000 and 1600.

4. The masonry is the same as found in the walls of Gezer, Jericho, and other Amorite forts, and assigned to the period 2000-1800.

5. The wall is a massive, two-face wall with stone filling between, and about 40 feet thick at the base.

6. With the bastions and tower added, the base of the wall must be quite 80 to 100 feet thick.

7. The Davidic and Solomonic repairs on the face of it fix its original date as pre-Davidic—*i.e.*, prior to 1050.

8. The later repairs on the face of the tower, on the face of the Solomonic repair, the "Hezekiah" outer wall which may be earlier than Hezekiah, the Greek wall on the top of the Hezekiah wall—each item introduces a contrast in masonry with the original, so that the cumulative effect drives us to the

conclusion that we have here the handiwork of two different races of people, and that the inner wall must be the work of the people who occupied the fortress before David took it. It is the Jebusite wall of the fortress.

Date of the Bastions and Glacis.

The north and south stair bastions belong to the same period as the inner wall. Both are built on to the face of the wall, undoubtedly: but they are none the less contemporaneous.

The foundations of these bastions serve as the foundations of the wall. They take the place of the rock, and the wall rests on them. Their lower courses were therefore laid before the wall itself was built.

The sloping face, in the form of steps, was doubtless thrown up after the wall was finished.

The masonry is the same.

The kernel of the tower, the glacis, is also exactly the same type of masonry, and was originally an ordinary sloping glacis, thrown in between the two stair bastions. It also is part of the original Amorite-Hittite fortification.

Everything points to the fact that these are the walls built round Zion by the amalgamated Amorites and Hittites, exactly in accordance with Ezekiel's statement (xvi. 3, 45), somewhere about 2000 B.C., though this does not preclude the probability of an earlier occupation of the site by the Amorites alone. The Hittite origin of Zion is perhaps referred to also in Isaiah lvii.

I was unable to trace any connection between the northern outer and inner walls and this massive eastern wall. The northern inner wall is on a very much smaller scale, and one can hardly accept it as anything but the wall of a citadel within the city, or the face of an earth rampart.

THE WESTERN WALL OF ZION

The line of the western wall, along with a gate, has now, I think, been found. There seems no doubt that this wall ran along the western edge of the Rock of Ophel, a base having been found for it a little down the slope, so that the entrance by this gate must have been a steep ascent or staircase into the city.

Not even a scrap of Amorite masonry, however, has been found in this western wall. It is all of the Herodian or Roman period.

Even the gate belongs to this late period as it stands, but there is no doubt that it marks the site of a gate of the Jebusite period. The predilection for preserving the position of gates in the East is very pronounced.

That this western wall rested on a bed cut for it in the rock some distance down the western slope of Ophel is of great interest, in view of my suggestion that the continuation of the Hezekiah outer wall may have rested on a similar bed on the Kedron slope, and so may have included the massive monolith gateway referred to in our discussion of the outer wall.

THE SIZE OF THE STRONGHOLD

Accepting this western wall as marking the western limit of the fort, we find that the Amorite stronghold of Jebus, extending from the northern limit of Field 5 (plan of Ophel) to the Pool of Siloam, which it included, covered an area of about 16-18 acres. This is a very rough calculation.

In Field 5 the breadth was only about 50-60 yards. Further down, in Fields 11 and 13, the breadth was roughly 110 to 140 yards. Its length was less than 800 yards.

It seems an insignificant "city" to have played so important a part in the world's history, and it has had a wonderfully chequered history, but, as an Amorite stronghold, it ranks as a large "city." Gezer and Lachish are the only two yet excavated which exceed it in size. Of the others, several—Bethshemesh, Jericho, etc.—are only about one-third of its size.

The smallness of these forts inclines us to think that some of them were mere "holds to go down into" when emergency arose. Zion, the city of David, thus remained as originally built by the Canaanites. David reused the walls, merely rebuilding and strengthening them where necessary; and these walls remained the walls of Zion till Roman times. In fact, the destruction of the N. stair bastion was probably the work of Titus, whose engines were placed on the Mt. of Olives, near the site of the new Hebrew University.

THE OUTER OR HEZEKIAH WALL (2 Chron. xxxii. 5)

The outer wall runs almost parallel with the old Jebusite east wall from the Davidic tower southwards. It joins on to the south side of the tower by a straight joint. The outer face of it runs flush with the face of the tower. It is 10 feet in breadth where it leaves the tower, and its foundations rest on the steps of the south stair bastion at a depth of 28 feet from the surface level. The outer wall thus encloses the south stair bastion, and its inner face is about 15 feet out from it at the highest point of the wall as it stands. The inner face shows excellent masonry.

It is curious to find a second wall enclosing such a bastion: but the wall had to be joined to a point where its junction would not be a weakness: and the south corner of the tower was the only such point available. The outer wall, therefore, was joined to the tower, though its real purpose was to strengthen the section in Field 9. It runs parallel with the inner wall from the tower down to the sewer, a distance of about 150 or 160 feet, the space between the walls averaging 27-30 feet, exactly as at the north end of the city and at Jericho.

At a point in its inner face in Field 9, about 105 feet from the tower, the builder of this outer wall made a false break in it. The effect of this break, which leaves a vertical offset projecting about 12-15 inches, is to change the direction of the wall and bring it once more parallel with the inner wall and scarp.

In this corner or false break, several blocks show chiselling like the Solomonic dressing already described.

Opposite to the mouth of the great cave we have exposed 23 feet depth of this wall, of which 17 feet is finished masonry, and the other 6 feet seems rough foundation wall.

This outer wall comes to an abrupt end at the point where the sewer of a later date cuts through it. As we shall see, south of this sewer it is replaced by a later wall of the Greek period.

An interesting feature of the masonry of the outer wall is the presence of a weep-hole or outlet for drainage in its inner face, 30 inches high by 12 inches broad.

The masonry of this wall is exactly like the masonry usually attributed to the period of Hezekiah. It is composed of polygonal blocks of no great size, and most of them regular in shape. There are few interstices; but these are filled up

and heavily plastered over, so that the chips used in filling them are not visible. The face of the wall, therefore, shows only the flat surfaces of the various blocks outlined in a heavy coat of mortar. Several blocks seem to show Solomon's dressing. These have been taken from some Solomon's repair near at hand.

The wall is built on the same principle as the others, and consists of two well-built faces of stone with filling between them. The filling, however, is mainly earth containing potsherds which have been found in the vicinity. The wall had been hurried in construction, perhaps on the threatened attack by Sennacherib (2 Chron. xxxii. 1-5).

In Field 9 the outer face of this wall had disappeared, quarried away, doubtless, for later buildings. It seems to have been the outer face of this wall, near to its junction with the tower, that Guthe found.

THE OCCASION AND DATE OF THE OUTER WALL

In 2 Chronicles xxxii. 2-5, etc., are recorded the preparations made by Hezekiah for the coming attack of Sennacherib in 701 B.C. He stopped the waters of the springs outside the city—Gihon and En-Rogel. That is to say, he made them inaccessible to an enemy from outside by building them over. He stopped also "the brook that ran through the midst of the land"—namely the Brook Kidron, which carried away the surplus water from Gihon.

These two statements refer to his bringing the waters of Gihon down to the new Pool of Siloam by his famous tunnel, and show the occasion which led to his making the tunnel. They indicate, also, that his tunnel dried up the Brook Kidron, and that when the tunnel was completed, he built over Gihon so as to conceal and make it inaccessible. He seems also to have concealed En-Rogel, which is known now as Job's Well.

Verse 5 narrates how he repaired all breaches in the city wall, *built another wall without*, and repaired Millo (the citadel) in the city of David. I have no doubt whatever that this wall which I found is the "other wall without" which Hezekiah built when he was strengthening himself against the attack of Sennacherib. All the evidence supports this view, unless the outer wall is older and "built" here means "repaired," as it often does.

The question may well be asked why it should have been necessary to build an outer wall at this point in the city's fortifications. We know from the above passage that in his time the fortifications were in a bad state of repair. Even the citadel, "Millo," was in a state of disrepair. We know, too, that he certainly built or repaired an outer wall. The only question is its locality. Isaiah xxii. 11 implies also the existence of two walls (see Gihon Rock Cuttings, Tunnel I).

I have found that the Jebusite masonry of the inner wall from the south stair bastion, down to the extreme limit of Field 9, has almost entirely disappeared. Not only so, but it appears to have suffered from attack or disintegration in both David's and Solomon's reign, for I found on its face repairs of considerable size, made by these two kings. It seems that this was a favourite place of attack. In any case, these facts make it most natural to expect a second and outer wall to be added at this point, where either the inner wall was weak, or it was very liable to attack. In fact, but for these passages quoted, I should be quite prepared to believe that the outer wall was built before Hezekiah, perhaps by Rehoboam.

David and Solomon, and probably their successors, had gone on repairing the inner wall, but Hezekiah strengthened it by an outer wall. Isaiah xxii. 10 suggests that his work was hurried. He had no time to quarry fresh materials, for he broke down houses to build it, and his masonry confirms this.

The passages 2 Kings xxv. 4 and Isaiah xxii. 11 both imply the existence of "two walls" at this period, though neither passage is clear about their locality. There is no direct reference to an outer wall or to double walls in Nehemiah iii., but verse 27 is interesting. It says "the Tekoites repaired another piece, over against the tower that lieth out, even unto the wall of Ophel." This "piece" may be this section of the outer wall, and "Ophel" in Nehemiah's time must refer to the northern citadel or Millo. Otherwise, we must assume that the outer wall had been buried in its own debris in Nehemiah's time, which is quite possible, but not at all likely, as we found by the pottery that the space between the walls had been open to a depth of 20 feet in Maccabean times (150-50 B.C.).

The Evidence of the Pottery.—At 20 to 27 feet depth from the surface, the pottery at the base of the inner face of the wall was early Hebrew ware of 900-700 B.C. Even at that point, I had not quite reached the lowest courses of the wall. The strati-

fication was unmixed. The pottery thus justifies a pre-Exilic date for this outer wall.

We must remember, also, that this wall was completely ruined in the uppermost 20 or 30 feet of its original height, and had lain buried in ruins for several hundreds of years. When the Greek outer wall was built over it, there was already an accumulation of 6 feet of debris above it in Field 9, and the later builders built apparently without being aware of its existence. They certainly did not dig down to found their wall on it. I undermined the Greek wall to examine the debris on which it stood, and found pottery of the Late Bronze, pre-Exilic and Exilic periods, but nothing later than Maccabean, in it. It would appear, therefore, that this wall had fallen to ruin in the period of the Exile, and had been replaced by the later Greek wall. This further supports the pre-Exilic origin of the older outer wall.

THE SPACE BETWEEN THE WALLS: THE FILLING

This space averaged 27 to 30 feet in width in Field 9, but was narrower in front of the south stair bastion.

The filling is of great interest and importance.

That it had been purposely filled up is evident from the mixed stratification. The first 8 or 10 feet on the surface contained chiefly Arab remains. Below that was a layer containing pottery of the Maccabean period. The 12 feet below that, however, contained a mixture of potsherds representing every period from the Neolithic down to the Maccabean Age, the oldest being on the top.

Below that, at 20 to 22 feet depth, there was again a layer of Maccabean ware. From 22 feet downwards the stratification was regular and contained early Hebrew ware only. It was at 18 to 22 feet depth that the great number of inscribed Rhodian jar-handles was found.

The space between the walls was therefore vacant and the large cave open in Maccabean times, and the level 18 to 22 feet represents the earliest Maccabean occupation. The 12 feet above that they had filled up in the work of levelling down the upper city which Josephus speaks of, and the 8 feet level represents their occupation after filling up the space.

This "filling" ceased practically at the level of the outer wall as we found it—viz., about 10 feet down—so that the

later Greek wall served them as the east wall on the top of the Hezekiah wall. The Greek wall was therefore built in Macbean times.

The plastered cisterns built on to both outer and inner walls in this space belong to the late Arab or crusading period. There seems to have been a Crusader camp on the site, judging from the number of plastered silos and cisterns found in the three fields running down the east side and built on to the city wall.

2 Kings xxv. 4.

I cannot resist connecting this space between the walls with the statement in 2 Kings xxv. 4. There, we read that Nebuchadnezzar besieged Jerusalem. The siege began in the tenth month of the tenth year of Zedekiah's reign, and lasted about six months. In the fourth month of the eleventh year the famine was so severe that there was no food left. "The city was broken up," and "all the men of war fled by night *by the way of the gate, between two walls, which is by the king's garden.*" Straightened out in plain language, this means that the soldiers escaped down the passage between the two walls of the city, and out by the fountain gate beside the Pool of Siloam, which opened on to the king's garden. From that gate they took the nearest route to Jericho—*i.e.*, round the west end of the hill of Siloam village, past En-Rogel (Job's Well), through the valley to Bethany and thence over the hills by the old road which passes alongside the valley of the Brook Cherith.

As the garrison of Jerusalem must have been housed in the citadel, just inside the great tower above described, they probably passed down the steps of the south stair bastion into the space between the inner and the outer walls, and escaped down this very passage (see Frontispiece), which would naturally be kept clear for defensive purposes: or they may even have escaped by the funnel of the great cave which opened into the space between the walls.

THE HELLENISTIC WALL (c. 150 B.C.)

The Greek wall was built upon the 6 feet of debris that had accumulated above the Hezekiah wall.

The builders laid a heavy basis of powerful concrete on the surface of the ground, and built on it. So powerful was this

cement conglomerate, that though we excavated a tunnel of 15 feet length under the base of the wall, that stretch of wall still stands in its own strength, though resting on nothing. This cement conglomerate was the filling of the wall. The outer and inner faces consisted of oblong blocks, which are 44 inches in length, 26 inches in breadth, and only 9 inches thick. They are practically all of the same dimensions. These facing blocks were placed upon each other according to the best rules of masonry, but they manifestly depended on the cement filling behind them to keep them in position.

From the remains uncovered, we find that this later wall ran along the top of the Hezekiah wall from the tower down to the sewer (in Fig. 9), and south of the sewer it replaced the Hezekiah wall, which has here entirely disappeared (see Illus., p. 199).

Just opposite to the mouth of the great cave, the section of the Greek wall has been stripped of its facing blocks, both inside and outside, some having been broken up and carried away, and the others left lying on the top of the wall: but the thieves did not break up the conglomerate filling. It is left intact. Two of these stolen blocks were used to form the western impost of the arch of the Eusebius house in Field 5 (see *Ann.* IV, 106, Fig. 95).

A few yards south of the cave, however, I found two sections of the outer face of this Greek wall.

Of these two, the northern section, which consists of only 10 blocks *in situ*, is a Roman repair. The masonry is different. The blocks are much thicker than those of the other section. They measure 24 by 16 by 9 inches on an average.

The southern section is Greek masonry, as described above (see photo). It consists of seven blocks *in situ* with six foundation blocks under them.

At the extreme south-east end of Field 9, the southern limit of our excavation, I found another section of the inner face of this Greek wall. It consists of only seven blocks, which show a space where either two blocks have disappeared or there had been a small postern. This section is 22 feet long. The "postern" gap is 5 feet wide (Illus., p. 199).

Stone blocks, of what may have been a small gate-tower, remain *in situ*, and these were blocks carefully laid above the foundation wall, as if to form a pavement floor. It is quite likely that there was a small gate here in Maccabean times, and that these blocks are the flooring of the gate-tower.

The seven blocks of the Greek wall rest upon a roughly built foundation wall, thus indicating the exact level of occupation of the period when the Greek wall was built. The rock surface here was 20 feet down.

This built foundation was 6 feet deep. It rested upon a piece of finely scarped rock, 4 feet deep, for the rock at this point comes out 30 feet to eastward, and the space between the walls had here to be carved out of solid rock.

The level of occupation of the period when this Greek wall was built is therefore about 10 feet under the present surface level.

In excavating, we found the Arab stratum here 3 to 5 feet down, and the Maccabean at 6 to 8 feet. Thus 10 to 12 feet indicates a period about or somewhat earlier than the Maccabean age. The pottery found on the outer face of this Greek wall, on the level of its lowest course, confirms this dating. The Greek wall was therefore built about 150 B.C.

Only one block of this wall was found *in situ* in Field 7. This block, however, is just enough to show that the inner face of this wall ran practically flush with that of the Hezekiah wall at this point.

When this Greek wall passed into Field 9, the builders, having no longer any desire to follow the line parallel to the scarp and Jebusite wall, ran their wall straight southwards, ignoring the bend of the older walls. The result is that, though at its entry into Field 9 the inner face of the Greek wall coincides with *the inner face of the Hezekiah wall beneath it*, within a distance of 20 yards the Greek wall has almost passed off the Hezekiah wall altogether. It has, in fact, crossed it, so that its inner face now practically coincides with *the outer face of the Hezekiah wall*.

This Greek wall averages about 8 feet 8 inches in breadth. The facing blocks of the Greek section are dressed with a nine-toothed comb-pick, above a previous rougher dressing. Those in the Roman repair are not combed, but have a well-finished surface. The joints of the blocks in the Greek section are finely pointed with a strongly adhesive cement.

In the Roman repair there is one block which is one of the original Greek facing blocks reused. It is built in with its narrow edge outwards. Another of these Greek facing blocks was found in the debris in front of this Roman repair, and other two in Field 5 as mentioned above.

I found that this Greek outer wall continues also in Field 11. The strength of this wall obviously lay in the powerful cement used to bind and fill it, not in massive masonry.

OUTER FACE OF OUTER WALL

The outer or eastern face of the Hezekiah wall has been completely quarried away. As we saw, two small sections of the outer face of the Greek wall and one of the inner face were found. At the point in Field 9 where the Greek wall almost coincides with the Hezekiah wall, I tried to get down to the foundations, and we got down to about 17 feet from the surface of the wall. We had to abandon this, as it meant throwing out the face of the slope, a very expensive operation.

The contrast in the filling of these ramparts was very striking. The Jebusite wall filling had been a laborious task. It is practically all of stone lumps and chips. The Greek wall was solid concrete, into which the finely combed facing slabs were set. In the Hezekiah wall the filling was rubbish from ash-pits, the "waste places" around. It was obviously a hurried bit of work, with scarcely a stone in it.

The contrast in the facing was no less striking. The Greek wall must have presented a very fine appearance when it stood at full height. It is not conceivable that this wall could have been rushed up in haste. Nowhere else, however, around Jerusalem, so far as I have observed, has any other fragment of this class of wall been found. Apparently, it is confined to this substitute for the ancient outer wall.

THE SPACE BETWEEN THE WALLS: BELOW THE SEWER

Rock Scarping.—Below the sewer both inner and outer walls rested on the rock surface, which here projects as already stated. The rock was artificially deepened here at least 4 feet, and the outer edge was cut as a vertical scarp, on which the Hezekiah wall may have originally rested, and later the Greek wall.

This scarped face, 4 feet deep, is specially interesting. It is curious to find it so carefully scarped on the inner face. It is also very fine work, and closely resembles the scarped rock and chambers under the north wall in Field 5, which Macalister regards as Canaanite. The two are undoubtedly the finest

bits of rock cutting found on the site, and I have not come across any Canaanite scarping of this type recorded elsewhere. It has been done by vertical strokes of a finely pointed chisel or with a pointed hammer. The scarping on the rock face, 10 feet deep and about 20 feet long, above the cave-mouth in Field 9, is simply hammer-dressed. It is obviously Canaanite. The oldest authentic piece of Amorite cutting on the site is the rock-cut trench in Field 5, which I compared with the rock-cut moat of the citadel of Megiddo. In this trench the work is of a totally different type. There is no such careful dressing, and no cistern or rock chamber that I have seen on Ophel shows the finely dressed face seen on these two.¹

Of the 4-foot scarp between the walls, we can definitely say it was there several hundred years before the Greek wall was built, and was probably the work of Hezekiah, or of some of his predecessors. The pottery fits in with this, but the stratification in front of it was mixed up by the builders of the Greek wall. As regards the rock chamber and scarping under the north wall in Field 5, no definite evidence as to date was found in the shape of pottery. Even, however, if we allow that the chamber and the scarping are of the Solomonic period or later, this does not affect the fact that a Jebusite wall may have originally stood on this shelf of rock at the north end of Field 5.

It should be observed that the chamber had a domed or barrel-shaped roof, later broken away, and a rock shelf or divan down its west and east sides.

The scarping under the Davidic repair, just opposite the fine 4-foot scarp, is of no depth and is quite different work. The whole rock surface of this section below the sewer has been quarried and excavated. The quarriers' cuttings indicate that some of the large flat blocks of the face of the Greek wall had been taken out here. The cuttings are 9 to 12 inches deep, just the thickness of these slabs (Illus., p. 199).

A Rock Chamber.—Close to the south side of the sewer, and underlying it, was a rock-cut chamber, 13 by 10 feet. I cleared it to a depth of 12 feet, but the inflow from the sewer stopped the work at that depth.

This chamber was completely underground, and the surface of the rock was left to serve as its roof. At the south-west

¹ For other instances of scarping see *Gezer*, p. 107; *Ta'anach*, p. 96. Both of these may quite well be the work of Solomon.

corner a circular shaft (3 by $2\frac{1}{2}$ feet, and 5 feet deep), cut in the rock, led into the chamber by a narrow slit—too narrow for anyone to pass through. This seems to have been a cistern, with a hole in the roof for drawing water, and the circular shaft had been a filter-feed for filling it in the rain seasons. Curiously enough, it was plastered all over the interior, roof and sides alike.

In the later quarrying operations, three successive layers, 9 to 12 inches deep, had been quarried off the roof, till only a quarter of the roof is left. This explains why the original roof-hole, if it existed, has disappeared.

Contents and Date.—On the surface of the filling of this chamber we found Hellenistic ware, and again at 12 feet depth. The pottery between was a mixture of every period prior to Hellenistic. No Arab or Roman sherds were found. The breaking of the roof and filling up of the chamber, therefore, belong to the Hellenistic and Maccabean period.

The stratification under the scarp face was mixed to a breadth of 17 feet across the pit, and to this space all the quarrying was confined. The other 12 feet breadth in front of the Davidic repair was undisturbed, and here we found only pottery of the earliest Hebrew period and the Bronze Age at the foot of the Davidic repair, which confirmed our assigning the repair to David.

There is little doubt that this chamber had been cut at an early period. Had we been able to clear it, we could have proved whether it had an underground entrance and was one of a series of chambers or not, but that was impossible. At 12 feet depth, however, no trace of a side entrance was found, and as Hellenistic ware was found there, that must have been near the bottom.

The filter-shaft is no guide to its original purpose. It may have been made when the chamber was later converted into a cistern. It had been covered by a square slab fitted into a square niche cut to receive it. As the "slit" entrance goes to the very bottom, this shaft could not have checked the entrance of mud with the water. Since the chamber was so carefully plastered even on the roof, one is tempted to think that the plaster was intended to prevent the infiltration of drainage through the porous rock, and that the chamber had been originally used as a receptacle for things that would be damaged by water, while later it was converted into a cistern.

If it was a cistern originally, it is one of the oldest rain-fed cisterns known to us in Palestine.

Of 1,677 fragments of pottery from the filling of this chamber, 1,115 were Hellenistic, 550 Hebrew, and 12 early Canaanite.

OTHER CITY WALLS DISCOVERED ROUND JERUSALEM

Into the details of the work done by Bliss and Dickie between 1894 and 1897 I do not enter, because most of the walls which they found belong to the Herodian or Roman period, while others are later.

There is, however, one wall which is of special interest. It has been assigned to the period of Eudoxia. Part of it may still be seen by entering a tunnel from or near the English cemetery on the western hill. Mr. Ellis of Bishop Gobat's School begged me to come and see it, as the masonry was the same as the Solomonic repair on our tower on Ophel. Immediately on entering with a light I recognised the masonry and the dressing as Solomonic, but, as promptly, my wife pointed out that every stone had been redressed with a comb-pick. The masonry of this "Eudoxia" wall is undoubtedly Solomonic quarrying and dressing, but the combing is the work of a later hand. The materials must, therefore, have been taken from a Solomonic wall near by and redressed, or it must be a ruined wall of Solomon's rebuilt and redressed in the time of Eudoxia.

When Dickie authoritatively stated that masonry is no sure guide to dating in Palestine, only masonry of the late Exilic period was known. They had found no scrap of a wall of the Cyclopean type of masonry now so well known as the work of the Jebusites, Amorites, and Hittites. The peculiar bossed and drafted masonry of Samaria was also unknown, as well as the peculiar Solomonic dressing. The statement ought to be re-edited, as it is not strictly true.

TELL-ES-SAFI: GATH

Tell-es-Safi has been identified as Gath, a city held by the Philistines in the time of Eli and Samuel, about 1150 B.C.

In Joshua xi. 21-22 we learn that Joshua "at that time came and cut off the Anakim from the mountains of Judah and Israel, so that there were no Anakim left in the land of Israel,

save only in Gaza, Gath, and Ashdod." The Anakim are the Amorites, and Gath was one of their strongholds which Joshua failed to subdue. Samuel, however, took Gath from the Philistines (1 Sam. vii. 13-14). In that passage it is stated that the cities taken from Israel by the Philistines were restored to Israel from Ekron unto Gath. This implies that Israel had taken it before, probably from the Amorites, and had again lost it to the Philistines, who are now identified as Cretans farming the low-lying parts of Palestine and exporting the grain to their own barren country. Gath would be as important a place for them as Gerar, where evidences of their extensive farming have been found by Petrie (1926-27).

In Saul's time it had again reverted to the Philistines, as the great Philistine champion, Goliath, came from Gath (1 Sam. xvii. 52).

Tell-es-Safi is 5 miles west-north-west of Tell-Zakariyeh, which is either Socoh or Azekah of 1 Sam. xvii. 1. The Valley of Elah, where Saul's battle with the Philistines began (v. 2), runs westwards round the north side of the mound, and "at once enters the Philistine plain." Safi mound thus stands as a natural fortress between the Shephelah and the lower hills above it. The site fits in well with 1 Samuel xvii. 52, describing the pursuit of the Philistines to Gath and Ekron, where it appears that the battle began in the Valley of Elah and ended at Ekron, passing Gath on the way. The Hebrew text here reads *Gai*, but the LXX reads Gath, which restores the correct text. Akir, the ancient Ekron, is quite near to Safi.

Gath was still held by the Philistines when David fled from Saul and took refuge with its king, Achish (1 Sam. xxi. 10; xxvii. 2). Early in his reign, David took it (1 Chron. xviii. 1, with which compare 2 Sam. viii. 1), but there was almost continuous war between David and the Philistines, and again near the end of his reign Gath is the scene of conflict (2 Sam. xxi. 20).

In the reign of Solomon we find Shimei's servants taking refuge with the King of Gath (1 Kings ii. 39-41), from which it appears that early in Solomon's reign Gath was still outside of his suzerainty; but this inference is perhaps strained, as Shimei had no difficulty in recovering them.

In the reign of Rehoboam, however, it was occupied by the Hebrews and mentioned as one of the cities fortified by

Rehoboam (950 B.C.) (2 Chron. xi. 8, where, however, the text is doubtful). About one hundred years after Rehoboam (*i.e.*, 850), Hazael of Syria took the city (2 Kings xii. 17), but from whom he took it is not mentioned. Uzziah, again (*c.* 750), was at war with the Philistines, and broke down the wall of Gath, and Amos (Amos vi. 2), his contemporary, implies that Gath suffered the same annihilation as Samaria. No further mention is made of Gath in the Old Testament, in Maccabees, or in Josephus. Gath thus practically disappears by 700 B.C. from the Old Testament records, after a chequered history extending from at least 2500.

Gath was, therefore, as important a fortress for the Kings of Judah as for the Philistines, which means that it occupied a commanding position between the confines of the Hebrews and the Philistines. Both seem to have been equally keen to hold it. The keenness of the Philistines is intelligible. It was necessary for them to retain the fort to protect their farming industry. Judah desired it as an outpost to defend the confines of their territory.

GATH—AND THE EXCAVATION OF SAFI

The discoveries on Tell-es-Safi accord well with the requirements of the Old Testament.

The Old Testament speaks of Gath as a stronghold of the Anakim or Amorites in Joshua's time. The excavations have proved that it was a fortified city from 2000 or 2500 B.C. down to at least 1200, and of the period after this there is a city wall which has been assigned to Rehoboam. Thus the excavation results accord with the Old Testament narrative on this point.

The pottery proves that it had been occupied by the Amorites from about 2500 to about 1200 B.C., and shows that it was later occupied by the Hebrews.

Further, the Hebrew ware found is pre-Exilic, dating from 1100 to 700 B.C. The pottery of the mound from 700 down to 350 B.C. points to its having at that date fallen completely into the hands of Shephelah people.

Early Greek ware (700-550 B.C.), later Greek ware (550-350 B.C.), and some Seleucid ware dating after 350 predominate. After 350 the site was abandoned till Crusader times. We are, therefore, not surprised to find no reference made to Gath in Old Testament history after 700 B.C. The results of excava-

tion both confirm and explain the fact. By 700, therefore, Gath had ceased to be a "walled city" of Judah, though doubtless Hebrews continued to live there.

TELL-ES-SAFI: THE LATEST WALL

The Stone and Brick Wall of Rehoboam.

This city wall was built on debris 6 to 11 feet deep, above the remains of the earlier Amorite settlements. It was 12 feet thick.

Like the outer wall of Jericho, its upper part was of mud-bricks (sun-dried apparently), and the lower section of stone. The facing stones were laid in mud-mortar, mixed with straw. The bricks had been burned in a conflagration.

Buttresses.—There were no towers, but a series of buttresses, varying from 30 to 34 feet long and projecting only 2 feet, ran round the wall at intervals ranging from 28 to 36 feet.

Masonry.—The masonry is rudely faced ashlar, in courses from 15 to 24 inches deep. The corners of the buttresses are of well squared and well placed stones. Otherwise the masonry is irregularly coursed, the stones polygonal, and the interstices filled with mud and small stones. Apparently the builders had used materials from the earlier Amorite walls.

Dressing.—The dressed corner-stones are chiefly plain, but two or three drafted stones occurred. The tool used was a chisel, and no combing was found. Apart from corner-stones, there was no dressing.

Plaster.—An unusual feature is the fact that the face of the wall had been covered with a plaster made of dark mud mixed with straw, on which a coat of white plaster had been laid, made of ground limestone mixed with straw and water. This kind of plaster is still used in the Lebanon. It shone a dazzling white in the sunlight.

A Gate.—The main entrance had probably been on the south side. A roadway cut in the rock seemed to point to this, but search for the gate was stopped, owing to the vicinity of a Moslem graveyard.

This wall has been attributed to Rehoboam at about 950 B.C.

TELL-EN-NASBEH—HEBREW OCCUPATION—MIZPAH

At Tell-en-Nasbeh, now identified as Mizpah of Benjamin, a number of circular grain-bins or silos, 5 feet deep and 3 feet in diameter, were found. These were "constructed in one tier of rock laid in clay." This probably means they were rock-cut and plastered. By the pottery in them, they are assigned to the later Hebrew period (the Exilic period): but the pottery in them is no evidence of date. In the Exilic period they may have been used as ash-pits.

The Sealed Cistern or Rock-pit (Jer. xl. 6; xli. 7 and 18).

In the base of one of these silos was found a stone which securely sealed a 2-foot opening in the rock. This opening was found to lead down to a large rock-cut bottle-shape cistern, which was filled with a cone of debris, the point of which was within 4 feet of the opening. Its walls had been covered with several layers of plaster. Where the upper layer had fallen off, the under layer was seen to be *pitted thickly with pick or chisel holes*, to serve as keying for the upper coat.

At the lower edge of the cone of debris pottery of the Exilic period (597-440 B.C.) was found, and after exhaustive search no pottery or anything else of a date later than this was found in the debris. *Terra-cotta figures of a man on horseback*, and of Astarte, all broken, were also found in the debris.

The pottery and other contents thus prove that this cistern ceased to be used in the period shortly after Nebuchadnezzar's capture of Jerusalem in 597 B.C.

It is possible that this is the pit into which Ishmael cast the bodies of Gedaliah and his companions, when he slew them, as recorded in Jeremiah xl. 6-xli. 18 (see especially Jer. xli. 7).

Gedaliah had been appointed governor of the cities of Judah by Nebuchadnezzar, when he left the country, and he chose Mizpah as his headquarters. Ishmael made himself leader of the loyal Jewish party, who resented the yoke of Babylonia, and plotted to slay Gedaliah and his supporters. Though warned, Gedaliah would not believe it, and invited Ishmael to stay with him. Ishmael broke the laws of hospitality, slew Gedaliah and his friends, and concealed their bodies. When the eighty men from Shechem, Shiloh, and Samaria came down (Jer. xli. 5), he slew seventy of these also, and cast their bodies into a pit (v. 7).

The narrative says the pit was a cistern made by Asa, King of Judah, in preparation for a siege by Baasha, King of Israel (v. 9); and "Ishmael filled it with those that were slain." Professor Badé, however, does not mention any great pile of bones or human skeletons being found in the debris of this large sealed cistern. Yet it seems as if the evidence points to the identification of this cistern with the pit of Jeremiah xli. 7. It follows, if this is correct, that Tell-en-Nasbeh is the ruins of Mizpah.

A cistern would, of course, be defiled by human bodies thrown in it, and would never again be used.

This cistern happens to be the nearest to the citadel tower, which was probably the residence of Gedaliah. There were other seven rock-cut cisterns found in the city, one of them large enough to hold fifty people standing on the floor. This one had five shafts or openings for drawing water. A ninth cistern was later found, but has not yet been cleared.

A great quantity of antiquities, chiefly of the Hebrew period, was found in these cisterns. Much of the pottery is pre-Exilic ware.

The presence of so many cisterns as preparation for times of war and siege sufficiently establishes the fact that here was a very important fortress. The pottery indicates that it remained so throughout the pre-Exilic period (1000-600 B.C.).

The fact that the above cistern had been carefully sealed about 597 B.C. and never again reused suggests that it had been polluted by the throwing in of dead bodies; and it is on this fact that Professor Badé bases his inference that this was the "pit" which Gedaliah used in these passages, but his work has not yet been fully published.

A Hebrew Extension of the Town of Mizpah.¹

In more recent excavation it was found that the wall on the north side of the city was not the same as the inner and ancient Canaanite wall, but built at a later period. The builders had cut a wide trench in accumulated debris down to the rock. This they filled with loose blocks of stone with no binding to a depth of over 6 feet, and on this filling they built the wall. The result was that when the upper section had collapsed, the wall was left leaning outwards at such an angle as endangered its stability. Either the trench-filling had gradually slipped

¹ P.E.F. *Quarterly Statement*, January, 1930.

and caused the collapse, or the wall had been battered down in its upper part during an attack and the weight of the falling courses caused the lower section to fall out. A retaining or buttress wall was built to support it, and outside of this second wall was a moat excavated in the rock. The moat had really been the quarry for stones to build the wall. Though over a hundred yards was cleared, no gate was found in this part—but there had probably been a gate on each side of the town, N., S., E., and W. The south gate has been located. The wall on the E. and W. sides has not yet been traced. The pottery found proves that this wall had been built in the Iron Age. This means that the Canaanite walls had enclosed a smaller area and this wall is part of a Hebrew extension of the town. The northern wall of the Canaanite fort will probably be found some distance inside of this Hebrew north wall.

Suburbs.—Examination of the ground has revealed the fact that the town spread outside of the walls, and the broad level terraces of the southern and eastern flanks of the mound had been covered with suburban dwellings of the Hebrew period, dating from 1100 to 600 and later. House foundations, silos, cisterns with abundance of I and II Iron Age pottery were found on the eastern slope, and while uncovering these the workmen revealed the mouth of the large cave just under the outer or retaining wall built by the Hebrews. The inner wall at this point on the east side was the Canaanite wall above described. Between the walls the same circular corn-bins or granaries were found as those previously reported.

More Recent Details.

In the excavations of 1929 a large cave was found on the eastern slope which showed continuous occupation down to 700 B.C., the time of Sennacherib, when its occupation had ceased. The contents prove that this cave had been used for burial by the Amorites of the Early Bronze Age. Remains of fourteen skeletons were found in this stratum along with Early Bronze pottery. It continued to be occupied throughout the Middle Bronze Age, and the Early, Middle, and Late Iron periods (1200-600); but there seems to be no evidence of its occupation in the Late Bronze Age (1600-1200). This exactly agrees, Professor Badé states, with the strata inside the city. There the uppermost level is Hellenistic, chiefly Maccabean. Below that are the Late and Middle Iron Age strata: next come

the Early Iron and Philistine (1300-1100) periods. Beneath these is the Middle Bronze stratum and under it the Early Bronze Age remains. Here again the Late Bronze Age is unrepresented, suggesting that for some reason the town was left unoccupied for several centuries between 1600 and 1300 B.C. Then the Philistines appear to have occupied the site.

Above the Early Bronze Age burials was a stamped earth floor. The cave was occupied evidently as a dwelling in the Middle Bronze Age, and probably many of the burials and deposits had been removed before this floor was made. Professor Badé does not state so definitely, but it appears that the cave had continued to be used in the later periods also as a dwelling.

For Megiddo and Kirjath Sepher see Chap. III., under Canaanite Forts.

SAMARIA

When Jeroboam I founded the northern kingdom in the tenth century, he made his capital at Shechem, the modern Nablus, only forty miles from Jerusalem. Some time after 880 B.C. Omri, the fifth king of N. Israel, built the town of Samaria on the bare rocky slope and removed his headquarters to this new capital. Samaria quickly became a city of affluence and remained the capital till Sargon destroyed it in 722-721 B.C. The town thus held its position of prominence for slightly less than two centuries. It was a walled fortress of no small pretensions.

The City Walls of Samaria.

These were uncovered only at two points, at the great city gate on the west, and along the steep cliff south of the palace. The massiveness of these walls points to the period of Omri and Ahab. The original walls had been planned and carried out by Omri: and where Ahab's masonry occurs, it marks repairs or reconstruction, as, e.g., at the west gate.

The West Gate.

The west gate had consisted of two large square towers with a narrow entrance between them. Only one of these towers has been identified. This north tower was set in a rock-cut space 60 feet long by 50 feet wide, the rock trench being 6 feet 8 inches deep at the outer edge and 16 feet 8 inches

deep at the inner edge. Later, Greek masonry had been placed above it. Of the other gate-tower, no trace of a rock trench could be found in line toward the south. The south tower had, therefore, been probably built on the higher rock surface toward the east.

The masonry left pointed to its being the work of Ahab, very likely a reconstruction.

From the northern face of the north tower ran a shallow rock-cut trench. In this the original city wall had been built, and in this the later post-Israelite and Greek walls also stood. No early masonry was found in it.

The South Wall.

The steep cliff south of the palace was the southern limit of the Israelite city. The south wall was built partly on the sloping rock surface under it, and partly on the edge of the cliff itself. The face of the cliff was terraced to receive and make foundation for the wall resting on it, as in the western wall of Zion. The outer portion was sunk in a rock trench 6 feet deep. This trench was only 8 feet 4 inches wide, and the wall was set back over 40 inches from its outer face. The wall, therefore, at the trench level can have been only some 5 feet thick.

The 40 inches space was filled up with debris hard packed. Ten courses in order measured in depth, 16, 16, 16, 24, 14, 20, 18, 25, 20+, and 20 inches, thus showing much irregularity. The first four were hidden by the debris filling of the trench. The lowest course consisted entirely of headers, and those above consisted of a stretcher followed by two headers, and occasionally by only one header, though this rule was not observed throughout.

Dressing.—The bosses were left on all the blocks, though not so prominent as those on the palace of Ahab; and every block had a marginal draft on the four edges. They were closely fitted on the exterior face; but, as usual, the sides tapered toward the interior of the wall, the crevices being filled with chips.

The core showed that the interior of the wall was not so carefully built as in the palace walls.

The palaces are described under Hebrew Public Buildings.

TELL-ZAKARIYEH—AZEKAH OR SOCOH (1 Sam. xvii. 1)

This fortress has been identified with Azekah, and if this is correct it was probably a revenue outpost or garrison fortress built by Rehoboam about 950 B.C. The fort as found would support this identification.

It is a four-sided building of irregular shape, with a tower at each corner and one in the centre of the north and west sides—six in all. The east wall has an offset 33 feet out from Tower VI.

By the inside measurements, the north wall is 116½ feet long, the west wall 221 feet, the south wall 124 feet, and the east wall 170 feet. The fortress thus covers about 2,700 square yards or over ½ acre in extent. It rests on the rock surface except the inner wall of Tower IV, which rests on a rude mass of stone, and the inner corner of the offset in the east wall, which rests on 5 feet of debris.

There was evidence suggesting that there had at one time been an outside sloping earthen rampart or glacis on the wall.

The walls were mostly ruined so far down as to leave no threshold or other indications of the position of a gate or main entrance, and they varied from 6 feet to 7½ in thickness at different levels.

The Towers.

Except Tower II, *which is 25 feet*, the towers ranged from 29½ to 32½ feet in breadth and 13½ to 16¾ feet in projection.

As these measurements had to be taken at different levels, it is likely that the faces of the towers were all of equal breadth, though wider towards the foundations. The walls ranged in thickness from 4 feet 8 inches to 5 feet 3 inches at different levels.

Towers I, III, and IV were connected with the interior of the fortress by corner doors, which seem to have been simply openings left in the walls. In Towers II, V, and VI no trace of doors was left, the walls being ruined to a level below a possible threshold.

Offsets.—The west wall of the fort had been repaired between Towers III and IV, and this repair had an offset on the inner face. This offset was 9 feet to 14 feet above the rock surface, and above it the masonry is better squared and dressed, so that it may represent a later repair.

A drain 39 inches in section cuts through two lower courses of this masonry. This drain is probably of a later period.

A similar offset at the same level was found on the outside face of the north wall (between Towers II and III), and another runs around Tower I. The builder of the towers must thus be responsible for these repairs with offsets.

Masonry.—The main walls are of rubble ashlar laid in *mud-mortar mixed with straw*, with no lime.

Some of the stones are well worked, others are field stones varying in size. The largest measured 5 feet long by 21 inches

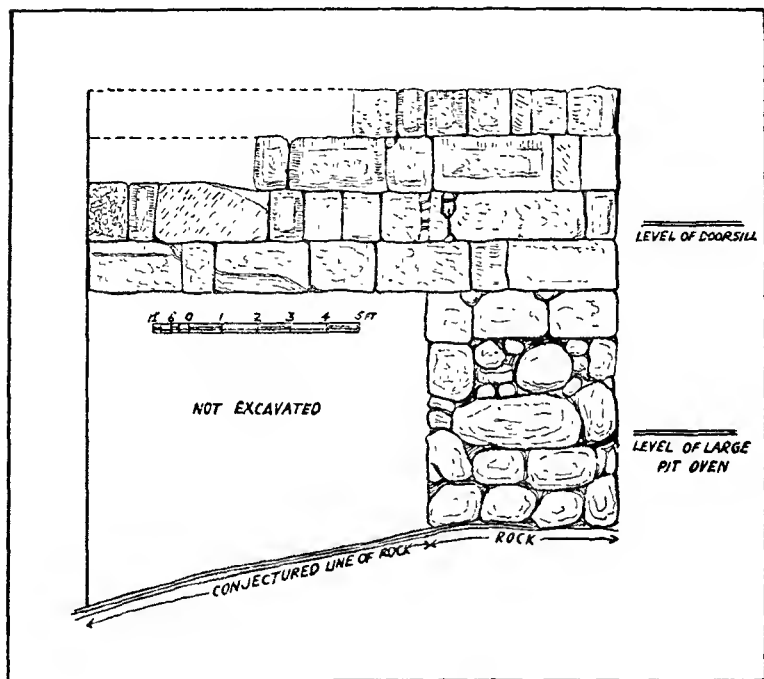


FIG. 30.—DRAFTED MASONRY FROM SAMARIA.

deep. Others measured about 3 feet by 19 inches, 3 feet by 22 inches, and $3\frac{1}{4}$ feet by 15 inches. Under ground, the masonry was not carefully coursed. Above ground, the courses are fairly regular.

The tower walls are of rubble "brought to courses" by well squared corner-stones at the external angles. Above ground the masonry was apparently of well squared stones.

Below the offset on Tower I were large blocks with *drafted edges and prominent bosses*, badly laid.

In Tower IV the masonry was a mixture of plain-faced blocks with drafted stones, that had large projecting bosses. Many of these stood on end, their height far exceeding their breadth, a characteristic observable all over the building. In the drafted blocks the margin varies from 2 to 4 inches, dressed with a broad adze or chisel making horizontal strokes, except on the upper edge where they are vertical.

This, I think, shows clearly the stones were dressed in position, as in Ahab's masonry at Samaria, and the margin was dressed off partly for lining a straight edge for each course, and partly also for decoration. A broad chisel or adze, a narrow chisel, and a sharp-pointed pick were the tools used in dressing.

Date.—The fortress, as it stands, does not belong to the earliest occupation. There was evidence of a Canaanite settlement of the period 1600-1200 B.C. Through the debris of this earlier settlement trenches had been cut, so as to sink the walls of the fortress to the rock surface, and at several points a space of 2 to 3 inches remained clear between the face of the foundation wall and the face of the trench.

If Zakariyeh be *Socob* or *Azekah*, the fortress was probably built by Rehoboam (2 Chron. xi. 5-10).

The walls of the fortress were cut to let in the walls of the towers, which were thus not bonded, but met them with a straight joint. Tower II was simply laid to the north wall and was not let in. The towers are, therefore, a later addition, and Bliss and Macalister have assigned them to Hellenistic times. The mixed style of the masonry, however, I think, indicates that they used earlier material, probably of the period of Rehoboam. The drafted edge is now known to date as early as the ninth century B.C., and is no longer a sure indication of Herodian masonry.

No partition walls, bonded to the external walls, were found. The fortress thus seems to have been a walled enclosure built to defend a garrison within it. It may, in fact, be another example of a revenue outpost.

The drafted masonry, which so closely resembles that of Samaria, indicates that Rehoboam used the same methods of building and stone-dressing as Jeroboam, Omri, and Ahab.

TELL EJ-JUDEIDEH

This mound has not been identified with any known Hebrew or Canaanite town. It had been a Canaanite fortress from 2000-1600 B.C., and then abandoned until it was occupied by the Hebrews, who never fortified it.

The Tell is about 5 miles south of Zakariyeh and the same distance north of Beit Jibrin.

The mound surface is 1,900 feet long, and this whole surface had been covered by the Canaanite and early Hebrew occupations. The later occupation in Greek and Roman times

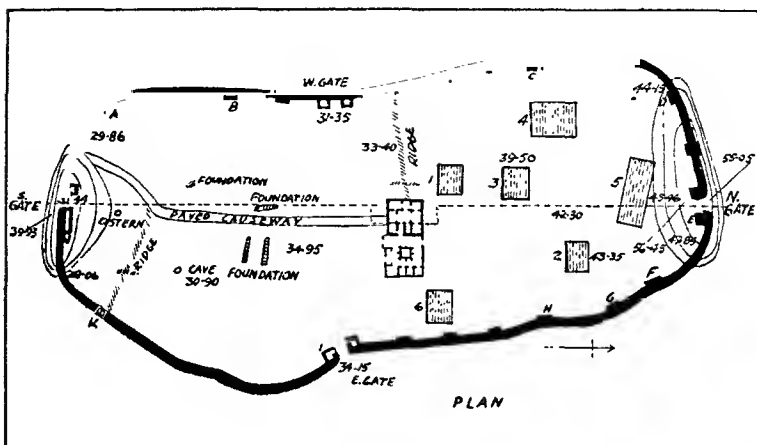


FIG. 31.—FORT WALL OF GREEK OR ROMAN PERIOD.

covered only 800 feet of the southern end of the mound. This is the space enclosed by the latest wall.

Greek or Roman Wall.—The pottery shows three strata. In the first 4 feet are Roman, Rhodian, and Seleucid ware, carrying the occupation back to 330 B.C. Below this is pre-Exilic Hebrew ware, and below it a stratum of the Middle or Early Bronze Age, dating 2000 to 1600 B.C. Curiously, there is no ware of the Late Bronze Age (1600-1200 B.C.), just prior to the Hebrew occupation.

The place thus appears to have been held by the Canaanites from 2000 to about 1600 B.C., and then abandoned. For the years from 1600 to the arrival of the Hebrews the mound is a blank.

Of the objects found in the mound, one of the most interesting is the small head of a statuette.¹

The head wears a curious helmet, of Assyrian type, and has the pointed beard usually found on carvings of Libyans or Amorites on Egyptian sculptures.² It is the head of an Amorite. Some time after 1400 B.C. the Hebrews occupied this site, but did not fortify it. It was fortified in Roman times.

The Walls.—Excavation was not carried deep enough to discover any trace of the early fortifications.

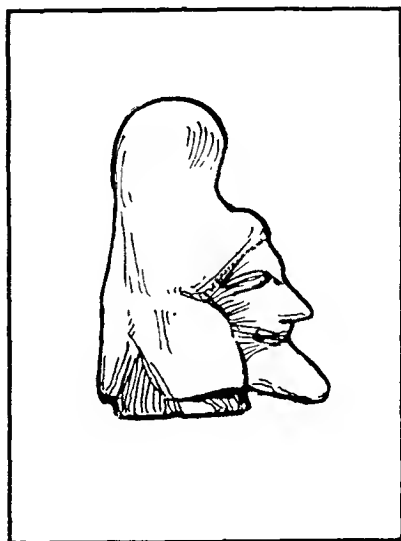


FIG. 32.—HEAD OF AMORITE STATUETTE.

The wall found is the latest wall of the Greek or Roman period, and all the other remains recorded, except pottery, belong to that age. The wall follows the contour of the mound, and was quite traceable without excavation. It is of rude ashlar masonry, laid in courses, but without mortar. The stones had been roughly dressed, hammer-dressed probably. The upper part is 10 feet thick all round. The chief peculiarity is that it has sixteen buttresses all projecting inwards. There may have been more. They are not at regular distances.

¹ *E.P.*, p. 40, Fig. 14, 4.

² *P. Hist. Eg.* II, 48, Fig. 17.

The only towers are the eight towers flanking the gates, two at each gate. The towers also project inwards. Some of these towers and buttresses are bonded to the wall. Others meet it in a straight joint.

The faces of towers and buttresses alike average 14 feet in length, but the east tower of the south gate is 34 feet. The buttresses are solid and project from 39 to 59 inches. In the towers are the usual small chambers measuring 6 by 7 feet, but the long tower chamber measures 28 by 7 feet, the walls being 3 to 4 feet thick. A stair on the inside wall of this long tower seems to have been the only means of access to the large chamber inside, or had led to the roof.

Gates.—In the south gate the masonry is better than that of the wall, the stones being dressed with a comb-pick. The threshold is of several slabs of stone, 14 inches wide. The double door post sockets and central bolt holes show it had been a twofold gate, the width being 10 feet 3 inches. The outer wall of the long gate-tower was covered with plaster keyed on sherds of late Roman ribbed pottery.

The doors of the north gate had been lined with metal plates, and these have chafed the jambs on the east side. This gate had been barred by a long transverse bolt or bar, fitting into sockets in the jambs at each side. This gate was 8 feet 7 inches wide, and no chambers were found in the towers. The east gate had had a double door, 10 feet 3 inches wide, but the gate had been built up. The flanking towers of the west gate remain, but the wall is completely demolished at this point.

A Roman villa, with a bath-pond in the centre of the atrium, was found almost in the centre of the enclosure.

*Masons' Marks.*¹—The masons' marks on stones from the central surface building consist of letters of the Greek alphabet, with 1, 2, 3, or 4 rough short strokes beside them, or with no stroke at all. The letters used are the Greek equivalents for a, b, d, e, ē, k, n, o, th, and perhaps s.

Identification.—Tell-Judeideh has not been identified with any known Hebrew or Canaanite town.

‘AIN-EL-GUDERAT, FORTRESS: POSSIBLY REHOBOAM

This fort in the wilderness of Zin was discovered by Woolley and Lawrence in 1914.² It resembles the north-east fort of

¹ See *E.P.*, Pl. 14.

² See *P.E.F. Annual* for 1914.

Ta'anach, but is much larger. It is rectangular, and measures 80 by 50 yards, covering about five-sixths of an acre.

The lower section of the wall, to a height of 10 feet, is very thick and solid, but above that the walls are mere shells enclosing rooms or corridors.

The facing walls are of thin well-shaped blocks of stone, some measuring 3 feet in length. The filling is of large stones, pebbles, and mud.

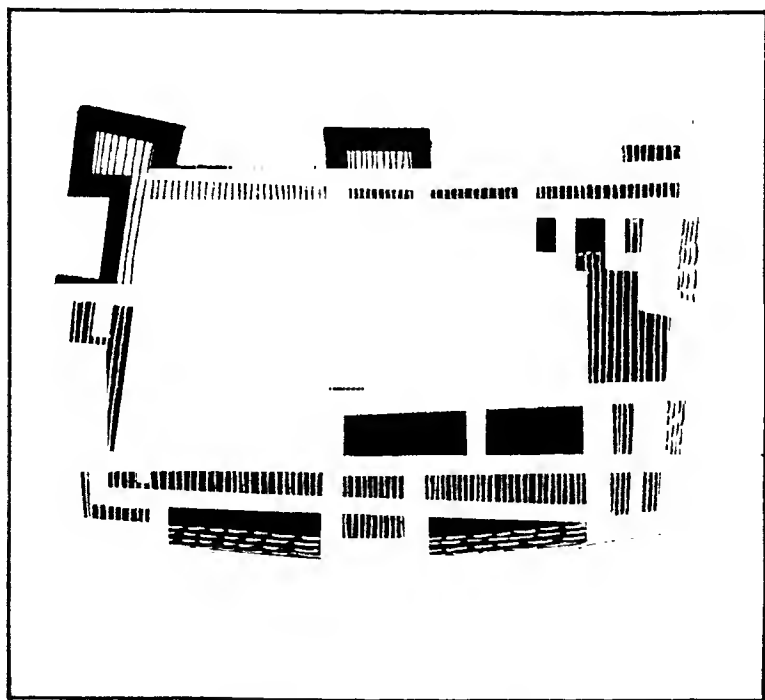


FIG. 33.—AIN EL-GUDERAT—REHOBAM.

There is a tower at each corner, and one at the centre of each side, eight towers in all. These all project outwards.

The fort is supposed to date not later than 900 B.C., and would belong to the reign of Rehoboam.

It is possible that the thin walls and rooms on the top of the solid wall are of a later period, and that the massive under-structure is of much earlier date. It has not yet been fully excavated. This fortress is almost a duplicate of that at Tell-

Zakariyeh, and is obviously of the same period. It had been built by Rehoboam as an outpost garrison fort, and has undergone repairs at a much later date. It has not yet been identified with any place mentioned in the Old Testament.

TELL-SANDAHANNAH

This Tell contains the remains of a fort of Seleucid times, 330 B.C. downwards, built over the ruins of an older Hebrew town. It has been identified with the Mareshah of 2 Chronicles xiv. 9-10, the scene of the battle between Asa and the Ethiopians. It had been a Hebrew outpost built by Rehoboam.

Tell-Sandahannah is simply Tell-Santa-Anna, from the ruined church of St. Anne, near by. It is exactly one mile south of Beit Jibrin. The surface of the mound is roughly circular, with a diameter of 500 feet. The town excavated was four-sided, but not square, measuring about 520 by 500 feet and covering 6 acres.

Two Walls : Inner and Outer.—The inner wall ran along the edge of the Tell. The foundations are of rough ashlar masonry laid in mud and varying from 8 to 11 feet in thickness. The wall itself is only 5 feet thick. It had a tower at each corner, with three additional towers on the south, and three on the west sides at irregular intervals. The towers project outwardly, except on the north side, where there is an internal tower that contained rooms. The fortress very much resembles those at Ain Guderat and Zakariyeh, and was a fort in Hebrew times, built by Rehoboam.

Masonry : Limestone "Bricks."—The masonry of some of the towers is interesting. These are built of limestone blocks, shaped as if modelled after the Babylonian bricks, and measuring 21 by 11 by 6 inches. They are laid in "English bond"—*i.e.*, a course of stretchers alternates with a course of headers. These limestone "bricks" are the characteristic building material of the town. Some similar "bricks" were found built in above the door of the villa at Judeideh.

They had been cut out of the very soft limestone of the district and allowed to harden by drying, probably on the building. They are dressed with a broad chisel.

The Outer Wall is further down the slope, the space between the two walls being at points barely 15 feet wide, and in two instances the towers touch each other. It is about 6 feet thick,

and the masonry is the same. Both walls belong to the same period, and both rest on debris, at a depth of only 4 feet.

The Gate is on the east side, and 9 feet wide. The door sockets were filled with lead.

Barrack or Treasury.—The gate opens directly into a large quadrangular building which had been a barrack or treasury.

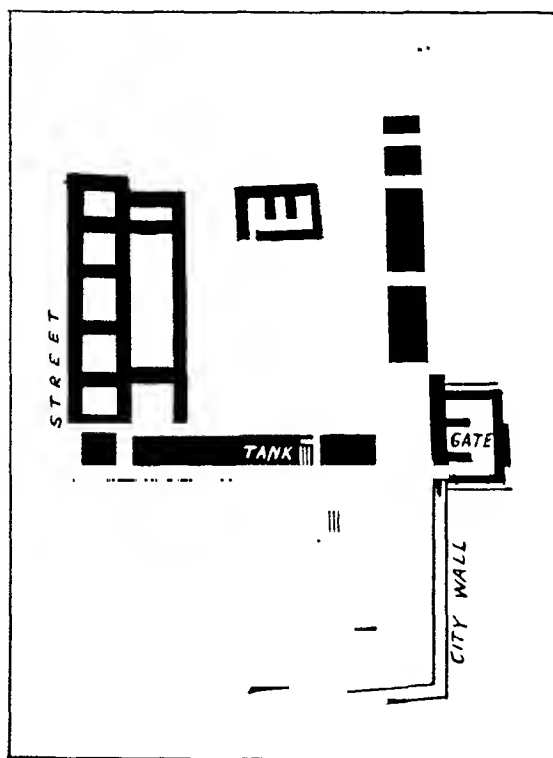


FIG. 34.—TREASURY OR BARRACK AT TELL-SANDAHANNAH (MARESHAH).

The east wing of this building contains six chambers, 17 feet wide and varying from 8 to 35 feet in length. This east wall coincides with the city wall, and the walls are (all over) 5 feet thick. This building may belong to the period of Rehoboam originally.

In the south wing is a large water tank. The west wing has a double row of chambers. The western row contains

six chambers, 13 feet broad and from $13\frac{1}{2}$ to $18\frac{1}{2}$ feet long. The eastern row has three chambers, the largest measuring 55 by 17 feet. These rooms had been paved with stone slabs. The size of these rooms suggests that this was really a treasury for storing revenue as it came in. The open court and arrangement of the structure are reminiscent of such treasures.

The foundation walls of the houses of the town were traced, and a complete plan of the town is shown in *E.P.*, Plate XVI.

Limestone Tablets (Imprecatory).—Near the south-west tower was found a pile of limestone slabs, inscribed in Greek. These are fully described in the volume.¹ Besides these, other three Greek inscriptions were found.

This walled town belongs to the Seleucidan period—the last three centuries B.C. It is built on the ruins of a Hebrew town. The pottery is all later than 350 B.C.

MARESHAH (2 Chron. xiv. 9-10)

Near by are the ruins known as Khurbet Merash. This name preserves the name of the Hebrew town Mareshah, but as these ruins are too small for so large a town, Tell-Sandahannah most probably contains the ruins of Mareshah.

Mareshah is mentioned in Joshua xv. 44 as one of the cities of Judah. It was fortified by Rehoboam (2 Chron. xi. 8), and was near the scene of the encounter between Asa and Zerah the Ethiopian (2 Chron. xiv. 9). It was prominent in Seleucid times, was plundered by Judas Maccabæus² and conquered by John Hyrcanus,³ restored by Pompey to the Idumæans,⁴ and finally destroyed in 40 B.C. by the Parthians.⁵

CONCLUSIONS

The results of excavation thus leave no doubt whatever that the Hebrews did not succeed in "driving out the Canaanites"; that the Hebrew conquest of the country, particularly the fortified towns, was a very gradual process, extending over the period between Joshua's arrival and the appointment of Saul as king; that in actuality the Hebrews never "drove out" or "killed out" the Canaanites, but continued to live side by side with them in the relations of conqueror and conquered, the

¹ See *E.P.*, chap. ix.

⁴ *Ibid.*, XIV, 4. § 4.

I.

² Jos., *Ant.*, XII, 8, § 6. ³ *Ibid.*, XIII, 9, § 1.

⁵ *Ibid.*, XIV, 13, § 9. See *E.P.*, p. 67.

conquered proving in many ways, particularly in religion, the conqueror; that on taking a fort or walled city Israel did not utterly raze the walls to the ground, but frequently settled in nomad fashion on the ruins for a time, and afterwards reused the Canaanite walls, rebuilding them as need arose; that they at first, on finding the Canaanite strongholds so hard to subdue, settled in the rural districts and the high ground around these forts, ultimately subduing them gradually and forcing the Canaanites into the position of tributaries. In the period 1050-950, under David and Solomon, the Hebrews reached the zenith of their power and glory, in conquest, in building, and in the acquisition of riches and treasure; but this glory was speedily eclipsed by the division of the country into the kingdom of Judah, in the south, and the northern kingdom, which maintained a spirit of hostility against each other.

Thereafter the country became an easy prey to Egypt, Babylonia, and surrounding nations.

CHRONOLOGY

The following is the chronology of the period of the Hebrew conquest most generally accepted:

Exodus .. ..	..	..	about 1250 B.C.
Joshua's arrival	..	..	1210 B.C.
Period of the Judges	..	..	1210-1080 B.C.
Samuel and Saul	..	..	1080-1040 ..
David .. ..	..	..	1040-1000 ..
Solomon	..	..	1000-960 ..
Rehoboam	..	..	960 ..

It should be noted that the Old Testament does not allow a forty years' reign to Saul, though this is implied in the New Testament. It is remarkable also that forty years is so often mentioned as the duration of a king's reign and in other circumstances. When one knows the fondness of the modern Oriental for using round numbers to express just what he regards as "a long time," one is inclined to think that the forty years is simply the Hebrew's expression for a reign of considerable duration; but this is to some extent counteracted by finding details of where the years were spent, as in the case of David.

On the whole, the above chronology fits in with archæological results no better than the other dating which is suggested below. There are difficulties, which are meantime insuperable, in either case.

Personally I feel that ultimately it may be found that Joshua reached Canaan about the fourteenth century B.C.; but the continually fresh revelations of the activity and ubiquity of Rameses III all over Palestine (*e.g.*, recently at Bethshan) make it hard to understand why the Book of Joshua speaks always of the Hebrews being in conflict with the Canaanites, the Amorites and Hittites, but never refers to Egyptian power in the land.

The date usually assigned to Rameses III is *c.* 1250-1194 B.C. It may be that we have taken it too readily for granted that this dating is correct, and that ultimately it may be found that this dating is 100-150 years wrong. We have assumed also that the dating of the Tell-el-Amarna Tablets and kindred cuneiform tablets found in Palestine at 1450 B.C. is correct; and, in fact, the dating of the Hyksos period at 2178-1587 B.C. with the expulsion of the Hyksos at 1587 B.C. has also been accepted as definite and reliable, though in all of these there is a measure of probability that they are slightly wrong. The date of Rameses III being accepted as correct, it is, of course, necessary to place the arrival of Joshua at not later than 1210 B.C., when the power of Rameses III was gone, or on the wane.

As the discoveries at Lachish (Tell-el-Hesi) have an important bearing on the date of the Exodus and arrival of Joshua, I have here given a statement of the various data which affect the problem.

In the ruins of Lachish there are two periods of destruction, either of which may represent Joshua's capture, if we assume that City IV was intentionally destroyed. This capture by Joshua may have happened either when City III was destroyed, about 1450 B.C., and covered with a layer of ashes, or somewhere between 1300 and 1200 B.C., when City IV had been destroyed, and the rude settlement of City V took its place with no city walls.

If City IV was destroyed by Joshua, it cannot have been standing till 1000 B.C., for Joshua cannot have arrived later than 1200 B.C.

City III was held by Amenhotep III and IV of the XVIII Dynasty of Egypt, and Lachish is one of the strongholds which

they were in danger of losing, and from which its governor Zimrida writes in one of the Tell-el-Amarna Letters.

City III was destroyed before 1400 B.C., and its ruins covered with ashes, though its city walls still stood to a certain height, as the arrangement of the blown ashes showed.

There is no definite evidence that City IV was a walled city. Fragments of the wall of City I with repairs on it were found in City IV stratum, but there is no evidence to show that City IV had the walls complete around it.

The walls of City III may have stood as the destroying enemy left them. Thus, so far as city walls are concerned, City IV may quite well belong to the period of the Judges. Petrie has originated the idea that this period was one of barbarism, houses being built of river stones and mud, and the settlers being squatters, but Bliss saw no stratum of river stones and mud. We may dismiss from our minds, I think, the idea that the Hebrews who conquered and took such forts were themselves unable to build them, or that the period succeeding Joshua's conquest was marked by a return to barbarism. Othniel rebuilt the walls of Kirjath-Sepher. Gideon attacked Penuel and Succoth, destroyed the forts and punished their defenders. He undertook a strenuous campaign against no mean enemy, too, the Ammonites, whom he pursued to their own stronghold of Rabbath-Ammon. We should look upon the period of the Judges as one of local consolidation of the Hebrew conquests made under Joshua. The various tribes had their districts apportioned to them, and were engaged in securing what they had already won, as well as in making further conquests.

The Judges were tribal leaders, who came forward as the crises demanding leaders arose.

The Old Testament narrative seems to me distinctly to describe the work of the various tribes after Joshua's division of the land as this consolidation of conquests and the acquisition of more.

On this point, Joshua xvii. 16-18 (see p. 166), is specially illuminating, for here Joshua is represented as deliberately advising the children of Joseph to make the best of what they have got—to cut down the wood on the hill part of the country and make settlements, and he assures them that the time will come when they shall drive the Canaanites out of their forts in the Valley of Esdraelon, in spite of their horses and chariots.

The fact that we find no remains of a crude or barbarous settlement of nomad Israelites in the stratum of City IV, therefore, need be no argument against that city being a Hebrew settlement. Nor can we set much weight on the fact that only Canaanite ware of the Late Bronze Age (1600-1200 B.C.) was found in City IV. As a matter of fact, we have as yet found no ware in Palestine which we can definitely set down as of Hebrew manufacture earlier than 1100-1050 B.C., and we can only assume that during their first occupation of the country they used Canaanite ware.

There are two large houses in the City IV stratum, one the square building of nine rooms found by Bliss, covering an area of 56 feet square, and the other the "pilaster building" found by Petrie, which is only about 22 feet square. Both seem to have been store chambers of some sort, and both belong to the fourteenth century B.C., but only the foundations remain. Though these show some skill in architecture and accuracy in planning, I do not know if we are entitled to assume that the Hebrews then had no knowledge of building and were incapable of building such houses. They had the bricks lying to hand in the ruins. The builders of the pilaster building built from ruins, for they took the pilaster slabs, as well as other stones, from a building that must have belonged to City III.

So far as the mound itself and its contents are concerned, there is nothing to negative the supposition that Joshua destroyed City III in the fourteenth century B.C., and left the ruins lying waste for some time, during which the bed of ashes accumulated.

City Sub IV and City IV may thus represent the earliest settlement of the Hebrews on the ruins at about 1350 B.C., Joshua having taken the city about that time.

The other alternative is that Joshua destroyed City IV some time later, according to the dating of the mound by Petrie and Bliss, and Cities IV and V would represent the period 1300-1100 B.C.

If Bliss is right in dating City V at 1000-800, City V would be the city of the time of David, Solomon, and Rehoboam; but if the wall of City VI is to be assigned to Rehoboam, City VI must, of course, date as early as 950 B.C., and City V must be earlier.

If, therefore, we assume that City IV was destroyed by Joshua, the dating of Cities IV, V, and VI will have to be

thrown back at least 150 years. Bliss has dated City IV at 1300-1000 B.C.

The period occupied by the Judges has been disputed. If we take it, as Petrie does, that those of the north, east, and south ran concurrently, the whole period covered would not exceed 130 years. If we take it that each Judge ruled all Israel and they ran consecutively, the period covered is about 360 years.

The date of Saul is universally agreed on as about 1100 B.C.—certainly not later than 1050 B.C.

If we add 150 to 1100, that gives 1250 B.C. as the approximate date of Joshua's capture of Lachish, which suits City IV. If we add 360, that gives 1460 B.C. as the approximate date of Joshua's conquest, and fits in with the dating of City III.

Everything seems to fit in with this latter supposition, that Joshua took Lachish at the time when it was so feebly held by Amenhotep III and IV of Egypt. The Exodus would thus be thrown back to the fifteenth century B.C., and there is no doubt that Tell-el-Hesi contains the ruins of Lachish.

This exactly agrees with the date assigned to the Exodus by the Old Testament itself. In 1 Kings vi. 1 it is stated that Solomon completed the temple in the fourth year of his reign, in the four hundred and eightieth year after the Hebrews were come out of the land of Egypt. If Solomon began to reign at 1000 B.C.,¹ this gives roughly 1480 B.C. as the date of the Exodus, and 1440 B.C. as the date of the arrival of Joshua in Canaan.

If we accept this date—and archæology seems to force it on us more and more emphatically—it was certainly City III, the city held by Akhenaten (the father-in-law of Tutankhamen), that Joshua captured, and the arrival of the Hebrews in Canaan coincides with the events referred to in the Tell-el-Amarna Letters, or soon after.

The date 1255 B.C. for the Exodus, which is based mainly on evidence gleaned from Egyptian discoveries, seems to me to conflict seriously with recent discoveries in Palestine.

It would thus appear that the Khabiri (confederates) of the Tell-el-Amarna Letters may after all prove to be, or at least to have included, the Hebrews, whose arrival in Palestine coincided with a general revolt against the Egyptian monarch, and they may thus quite well be named the "Confederates."

In a letter of Abdi-taba of Jerusalem to Pharaoh, Abdi-taba

¹ *G.A.S. History.*

states that Jerusalem is besieged by the Khabiri, and he is sorely pressed. Moreover, Askalon, Gezer, and Lachish have joined the Khabiri in their attack. It is very singular that three of the five Amorite cities which combined against Joshua (Josh. x.) are here mentioned.

It may quite well be that Joshua, having captured Lachish and Gezer (Josh. x. 32-33), compelled or induced them to join him in his attack on Jerusalem. Should it ultimately prove that the Khabiri were actually the Hebrews, this letter of Abdi-taba's is an interesting confirmation of Joshua x.

Whoever these Khabiri were, they were certainly out to destroy the Amorite or Egyptian supremacy in Southern Palestine: for here are three of the chief Amorite strongholds, two apparently overcome and one being besieged by the Khabiri. The identification of the Sagas of Khabatu (robbers),¹ who were allies of the Amorites in the north, with the Khabiri must therefore be dropped. They cannot be the same people. The activities of the Khabiri were thus extended, if not confined, to Southern Palestine, which suits the Old Testament narrative well.

Cities IV and V would thus represent the period covered by the Judges, Saul, David, and Solomon: during which period Lachish was occupied by Hebrews, but was not a walled city.

The next city (City VI—18 feet from the surface) was a walled city, and Petrie has assigned the wall to Rehoboam. Bliss dates the city about 800 B.C., on account of an inscription found in its ruins: but Petrie is right in dating it at 950. If there was no wall round City V, City VI must be the city which was fortified by Rehoboam or by his father Solomon.

The burnished Greek ware of City VII made Bliss assign it to about 500, but Greek ware had found its way into Palestine by 700 B.C. Certainly the Greeks were trading with Palestine in the eighth century. The same ware continues to be found in City VIII, but no coin of Alexander nor ware of the Seleucidan period was found on the mound at all, nor anything later than this Greek ware. It is clear, therefore, that after its destruction by Sennacherib, in 701 B.C., Lachish was never again occupied as a walled city, and was inhabited only by casual settlers down to perhaps about 450 B.C.

As to the date of Joshua's conquest, there are thus two main conflicting considerations. If we place the Exodus at 1255

¹ *E.E.O.T.* (Duncan), p. 48, T.A. Letters.

and his arrival about 1215, the period allowed for the Judges would be too short, if we regard the periods of their power as running consecutively. If, however, we divide the Judges into three sets ruling east, north, and south respectively, the longest period covered is 128 years. This would bring the date of Samuel's accession to power down to about 1080 B.C. Unless we allow less than 40 years' reign to Saul, this would not fit in well with the dating of the early monarchy, as the long rule of Samuel is also unaccounted for. The other conflicting consideration is, as mentioned above, the great activity of Rameses III in Palestine and the fact that he is never referred to in the narrative.

Sir Flinders Petrie thinks it is impossible that his power in Palestine could have been so great, and yet be ignored by Joshua's narrative. He, therefore, contends for dating the arrival and conquest of Joshua at about 1215 B.C. (see also p. 118 *seq.* Jericho).

Though we feel that Joshua's arrival in Palestine in the fourteenth century B.C. fits in well with our present archaeological knowledge and with Old Testament dating, yet these difficulties continue to face us, and we must await further discovery to solve them.

HEBREW POTTERY, 1200-1050: THE PERIOD OF HEBREW CONQUEST OR PERIOD OF THE JUDGES, 1200-1050 B.C.

Though the Hebrews were in Palestine by 1200 B.C., there is no ware known to us of the period 1200-1050 which we can set down as distinctly Hebrew. The earliest date assigned to Hebrew ware found so far is the period of David or about 1050. It may be that we are underdating some of the Hebrew ware found: and there are certainly some Hebrew types, notably the fine wheel-burnished bowls and pedestal bowls or braziers, which we know were well-known types, even earlier than 1200 B.C.

I have, however, made a collection of types of ware,¹ which from authentic data we are able accurately to assign to this period, 1200-1050. In this collection, however, Canaanite types and methods prevail: and it is only when we reach the period of David and Solomon that we find a ware which may be called distinctly Hebrew. It would seem, thus, that the

¹ To be published in another volume—*Corpus of Palestinian Pottery*.

Hebrews at first used vessels made by Canaanite potters, while they themselves were engaged in conquest and consolidation. In the pottery of this transition period there is a tendency to break the rounded surfaces of vessels by one or more pronounced lines or corners. The shoulders of jars and jugs, *e.g.*, are more marked. Broad ribbing on the sides of vessels appears. Both of these features occur in Hebrew ware.

Long cylindrical jugs, tapering slightly to the rim, spinning-top shapes, false-neck jugs are features. Large amphoræ, jars, and bowls have sometimes elaborately ridged rims, the jars with flat shoulders and cylindrical bodies. These features are all common in Hebrew ware.

The clumsy "rhone-pipe" filter-spouted Philistine jug continues to abound. (See *Illus.*, p. 142.)

Store jars, cooking-pots, footed bowls, and pedestal bowls or braziers occur as in the III Bronze Age.

In short, the forms, the ware, and the baking were very much the same, and some think this characteristic ware of the III Bronze Age persists even throughout the Hebrew period, alongside of the Hebrew ware, as I found on Ophel. This is an interesting confirmation of the statement, of frequent occurrence in the Old Testament, that the Hebrews did not drive the Canaanites out of their cities. We may, in fact, say that archæology confirms this statement all round. When they did capture the Canaanite forts, they settled down alongside of the former occupants in most cases, so that we find both types of ware existing alongside of each other.

HEBREW POTTERY : PRE-EXILIC, 1050-597; POST-EXILIC, 597 B.C.-70 A.D.

Hebrew ware of the pre-Exilic period is very easily recognised. It is a totally distinct type and inferior to the Canaanite in workmanship, though the forms of vessels are largely borrowed from them. The ware is lumpy, badly baked, and clumsy. There is none of the fine crispness of III Bronze Age Canaanite ware. It is inferior to it in composition, baking, and in form. In place of the finely ground white flint, which gave hardness to the Canaanite ware, Hebrew potters seem to have used ground limestone. The surface of the vessel is therefore covered over with white particles of limestone which wasted away under the action of water, and left the vessel pitted.

It cannot be said that the Hebrews showed any marked originality in introducing new methods or forms. On the contrary, they imitated badly, and such new forms as they introduced show deterioration. There is, for instance, a distinct preference for breaking the curved surfaces of nature forms by the introduction of corners near the base or at the shoulder—what might be described as a multiplication of rings or lines, always a mark of deterioration.

The tendency, therefore, is for curves to become straight lines, which gives the vessel a stiff and angular appearance, natural forms giving place to geometrical. This is specially marked in the pottery of the later Hebrew period.

The pottery found at Samaria is of special importance, because the date limits are accurately known. The earlier pottery from Samaria must date between 950, when it was founded by *Omri*,¹ and c. 720 B.C., when it was destroyed by Sargon.

The pottery found at Gerar is even more valuable, because there the stratification was undisturbed, and the various strata have been dated with remarkable accuracy by Sir Flinders Petrie. We therefore possess definite information regarding the Hebrew pottery of the period 1000-600 B.C., and our knowledge is now further supplemented by recent discoveries at Tell-Fara (Bethpelet).

Outstanding features in pre-Exilic Hebrew ware are the pedestal bowls or incense vases found in the III Bronze Age and transition period; the cooking-pots with rounded base, and the red pebble-burnished water jugs with loop-handle; store jars with cylindrical bodies and pointed base, some with necks contracted to the rim and some neckless; ring-stands for setting these pointed jars into to keep them upright; lamps that are imitations of the early Canaanite saucer lamp, but with longer wick-spouts, and some with heavy bases to make them sit solid; heavily moulded rims, sometimes with several ridges, on jars and basins, as well as broad ribbing on the sides; bowls with concentric circle decoration in the interior, and three-footed bowls; small bowls of ogee shape. Otherwise the forms are very much the same as the Canaanite.

An outstanding feature in decoration is the pebble-burnished ware. The vessels were sometimes first painted brown and

¹ 1 Kings xvi. 24.

then burnished, but the feature of the burnishing is that the vessel had been put on the wheel, and the result is that the burnishing is often a fine series of concentric circles, separated by almost imperceptible ridges made by the pressure of the pebble or tool on the soft vessel as it revolved.

Frequently the interior of a cooking-vessel has this effective burnishing, while on the handle and on the base the potter has rubbed a few lines as nearly parallel as he could by hand. The resulting effect is a great contrast to the interior.

In decoration, combing is used to some extent. The designs in painted ware are largely borrowed from the Canaanite, such as parallel bands, vertical or horizontal; spirals, circles, zigzags, triangles; checker and trellis patterns; parallel squares with lotus buds; rosettes, trees, and occasional animal figures.

Imitations of Cypriote bilbils and pilgrim flasks continue throughout this period. The Philistine jug, with its clumsy strainer spout, and the black burnished juglets also persist, but the burnishing in the latter class is inferior.

In the post-Exilic period deterioration is even more marked than in pre-Exilic, and here great assistance is afforded in accurate dating by the importation of Greek ware of known date, and the influence of Greek culture. For this reason, the last 400 years at least of the post-Exilic period is described by the general term Hellenistic. From about 160 to 50 B.C. the Maccabees, leaders of the national party, held sway, and their period is marked to some extent by a strong antagonism to foreign influence in every form. Even in the pottery there is a tendency to resuscitate ancient Hebrew forms, but the marked features still show traces of Greek influence. Many of the vessels of that period are exactly such as are found in the islands of the Greek Archipelago.

At 50 B.C. Roman influence appears and is very marked.

Thus we have materials for definitely dating all Hebrew pottery for the whole of the last millennium B.C. The only dark period is that between the exile of 597 B.C. and, say, 350 or 400 B.C.

At Samaria, Reisner has described the pottery of the period 700-300 B.C. as Babylonio-Grecian, thereby implying that the Hebrew ware is in that period influenced both by Babylonian and Greek art.

There is no longer any doubt that Greek influence was

strong in Palestine as early as 700 B.C., and it is plainly traceable in the ware assigned to that period by Reisner. It might be disputed, of course, whether he is not assigning that ware to too early a date at Samaria.

The period from 300 to 50 B.C. Reisner describes as Hellenistic, a term which seems to imply that the pottery in that period was not imported Greek ware, but local imitations of Greek.

The pottery in itself informs us that from the very outset the Hebrews have been slavish imitators, and have shown practically no originality or power of invention even in ceramic art. The same may be said of their constructions. The explanation must simply be that the genius of the race did not lie in that direction, but almost exclusively in the line of religion and morals. It is only now that Jews are beginning to distinguish themselves in art and literature and science. In every sphere but religion, they seem to have been under the domination of other races and civilisations, even of those whom they conquered in war.

HEBREW WARE FOUND IN EGYPT

It is an interesting question whether any Hebrew ware has been found in Egypt, and in this connection it is worth while noting that the pottery found by Petrie at Kafr Ammar in Egypt, which is described in his volume¹ as foreign, is Hebrew ware of the pre-Exilic period. This is assigned to the XXIII to XXV (c. 750-650 B.C.) Dynasties of Egypt in the volume.

1. Kafr Ammar is quite near Heliopolis, which was known as On in the Old Testament, and the headquarters of Joseph, the city which was the capital in Joseph's time, and it is curious to find Hebrew pottery in graves there belonging to that late period. The excavators did not recognise it as Hebrew at the time of excavation, but on Pl. 34, Figs. 60-69, are ten varieties of the Hebrew water jug shown above (see Illus., p. 142, No. 8). These date, however, between 1000 and 600 B.C. They cannot, therefore, belong to the period of the sojourn in Egypt.

2. At Tell-el-Yahudiyeh, identified as the site of the Hyksos Fort Avaris, it is difficult to say that some of the pottery is Hebrew; but some of that assigned by Petrie to a period prior to Thothmes III (about 1550 B.C.) very closely resembles forms that occur in Hebrew ware.²

¹ See *Heliopolis*, etc. (Petrie, etc.), p. 33, Pls. 33-34.

² See *H.I.C.* (P. and D.), Pl. 12 A.

The decorated ware¹ found there, and assigned to the XX Dynasty (Rameses III, *c.* 1200 B.C.), is described by Petrie as foreign. It is not Egyptian. It is Canaanite or Hebrew. The designs shown on Pl. 17 occur both in III Bronze Age Canaanite and in Hebrew decorated ware.

3. Of the pottery which I found at Saft, the site of the ancient town of Goshen, the earliest is Egyptian ware of the XVIII Dynasty (about 1600 B.C.), and here we might expect to find pottery of the Hebrew type. While, however, many of the forms might very well be Hebrew, there is no type of vessel among those found which we could with certainty describe as Hebrew. It is all Egyptian, and here no foreign element occurred, except Cypriote juglets and the peculiar squat cylindrical jugs, regarded as Hyksos, and assigned to the II Bronze Age in Palestine. At Saft these jugs were burnished black with triangular zigzag lines of white dots decorating the body. This form of decoration is not found in the Hebrew ware of Palestine.

4. At Retabeh, the site of Rameses, the treasure city built by the Israelites about the fifteenth century B.C., several types of vessel were found which closely resemble Hebrew ware in form, notably the jugs, bowls, ring-stands, and some decorative designs.²

The ogee-shaped saucers (Pl. 35. C) come from a foundation deposit of Rameses III (about 1200 B.C.). This type is also common in Hebrew ware.

These water-jugs from Kafr Ammar (Pl. 34, 60-66) are Hebrew forms and date from 1000 B.C. Petrie dates these examples at about 700 B.C. The ogee-shape bowls (33, 3-5) are Hebrew forms common from 1000-600. The cooking-pot is a very common Hebrew type at 900. The small jug from Leontopolis (marked H.I.C., 35. C) is the type discussed under Ta'anach, the date of its destruction, known in Isaiah's time as a Grecian smelling-bottle (Isa. iii. 20). Usually they are ornamented with concentric rings on the body. Though these are really of Cypriote origin, they are very common in the Hebrew period. There are many other instances of foreign pottery found in Egypt which is really Syrian or Palestinian ware of the Canaanite period, particularly the Hyksos and early Amorite ware.

These prove that there was constant intercourse between

¹ See H.I.C. (P. and D.), Pl. 17.

² H.I.C., Pls. 35 C and 36.

Palestine and Egypt from the earliest times, which continued down through the Hebrew period. The examples of Hebrew ware shown or referred to above indicate that there had been colonies of Hebrews—*e.g.*, at Kafr Ammar, the On of the Old Testament, at 750-700 B.C. It may be that On or Heliopolis, the headquarters of Joseph, was never without its Hebrew residents.

HEBREW PUBLIC BUILDINGS—KINGS' TREASURIES

Four Hebrew buildings have been unearthed of such large dimensions that they cannot be regarded as private dwellings. All of them are probably kings' treasuries in whole or part.

One is the pillared building at Lachish. Another is the "palace" of Megiddo. The third is the palace of Omri and Ahab at Samaria, with the extensions added by Ahab and Jeroboam II.

The fourth is the Maccabean palace at Gezer. There seems no doubt that in the period of the kings the public treasury was an annexe of the palace, where all the taxes and tribute in corn, wine, and oil were received and stored.

Under the Amorite rule, also, such treasuries seem to have been attached to the governors' residences in the various forts. Such subsidiary treasuries at various centres existed also in the period of the Hebrew kings (1100-600 B.C.): but the example of Samaria, where Ahab added such extensive storage to the palace, indicates that the subsidiary treasuries sent the taxes of their various districts to the chief treasury in the king's high house. It is this fact and the size of the buildings mentioned above that suggested to me that the Davidic wall, 92 to 100 feet long, in Field 5 on Ophel, was really the north wall of the king's high house, the southern portions having been completely removed by later builders, and that this house of David included the treasury. The fact that the walls of all these buildings, like those of Amorite governors' residences, were of such great strength as to be practically small forts further confirms this explanation of their purpose.

In this connection, the passage 1 Kings xii. 18 is of great interest. It is a mere passing reference to an incident which is full of instruction.

"Then King Rehoboam sent Adoram, who was over the tribute; and all Israel stoned him with stones, that he died."

Apparently Rehoboam's revenue officials in the various towns of Judah had not been able to collect the revenue and send it to Adoram at the king's treasury in Jerusalem. The king, therefore, sent his chief officer of revenue down to enquire into the matter: whereupon, it seems that the men of Israel who dwelt in the cities of Judah refused to pay taxes to Rehoboam, and stoned Adoram to death. The incident, which seems to be the background of one of the New Testament parables (Matt. xxi. 33-39), shows that the revenue headquarters was at Jerusalem, but there were revenue officials at various centres throughout Judea.

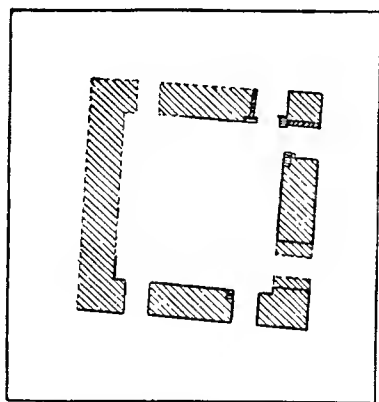


FIG. 35.—PILASTER BUILDING.

As will be seen, these royal treasuries consisted of large open courts, with storerooms round them; large rooms divided into corridors by one or two rows of pillars; and occasionally, also, other storage accommodation—as, *e.g.*, the small cells or bins between the double walls of the great courtyard of Ahab at Samaria, in the west fort of Ta'anach and elsewhere noted.

The three score and ten "kings" of Adoni-bezek (Judg. i. 7) had apparently been governors of towns or revenue outposts in the Canaanite period.

Who this servant of Bezek was is still uncertain, but he was manifestly at war with the Amorites and Hittites. He may be one of the earliest forerunners of the Philistines, as is very likely.

The sculpture of Shishak¹ on the wall of the Temple at Karnak shows the god Amon holding captive the cities of Judah for Shishak, and on it are portraits of the "heads" or governors of the various cities—one of them Jud-ha-melek, "Jehud the king's (servant)." It shows that at 950-750 B.C. the various towns of Judah had each a governor or revenue officer appointed by the king in Jerusalem. The princes of the provinces in the northern kingdom (1 Kings xx. 14-15) are the same class of officials.

LACHISH PILLARED BUILDING—CITY V—ABOUT 1000 B.C.,
DAVID AND SOLOMON

This building was 112 feet long and 45 feet wide, divided into three compartments by partition walls. It is a brick structure of the period of David or Solomon. The walls are 4 feet thick.

Each compartment was divided into three corridors, making nine in all, each measuring about 45 by 10 feet.

The subdividing pillars, which had also supported the roof, rested on blocks of Gaza limestone, 15 inches square by 30 inches high, laid down on a bed of clean yellow sand as in the pilaster building of the III Bronze Age, but sunk level with the floor. The symmetry is almost perfect, any error in alignment being due perhaps to subsidence or earthquake. These blocks were roughly dressed by a hammer with a broad sharp edge at one side and a point at the other.

A Bazaar, a Judgment Hall, or a Barrack.—If the centre aisle were used as a lane, and partitions ran from each column to the walls, this might have been a small bazaar, consisting of three sets of sixteen shops, each 10 feet long and $3\frac{1}{2}$ feet wide. This is quite a common size of shop in a Jerusalem bazaar today. If so, this was a bazaar of David's or Solomon's time.

It might, however, have been a building for public business, including a judgment hall, though the rooms (45 by 30 feet) are rather large. Or it may have been part of the king's treasury for storing and receiving revenue in kind.

Most likely of all, it may be part of the small fort in which the garrison and governor of David's and Solomon's time were housed. Lachish was not fortified, after its capture by Joshua, until the time of Rehoboam, and it was probably held by a garrison. In this case, the garrison fort would very likely

¹ See *Egypt and Israel* (Petrie, p. 72).

include the treasury. The pillared building seems to have been connected with buildings to the west of it, and later building seems superimposed. The inner eastern wall rested on the wall of an older Canaanite building. This had been the revenue outpost or fort for the garrison which held Lachish in the days of David and Solomon, while the town still remained unfortified after Joshua's destruction of its walls. It was later fortified by Rehoboam.

The floor had been covered with a rough pebble pavement up to the surface level of the stone bases for pillars, and there was a decided slope on the floor to north and west which Bliss assumes was its original condition. This is very unlikely. The slope must be due to later accident or subsidence.

The building covered about one-seventh of the whole area of the city, according to Dr. Bliss.

As this structure so closely resembles the stables of Solomon recently discovered at Megiddo, it may be that this building is another example of the "cities for his chariots, and cities for his horsemen" of 1 Kings ix. 19, 2 Chronicles viii. 6, and that it also is a stable.

This identification, however, would not affect my suggestion that Lachish was one of Solomon's store cities (1 Kings ix. 19) for revenue, as was also very likely Megiddo.

HEBREW LARGE PUBLIC BUILDINGS: STONE AND BRICK

MEGIDDO PALACE,¹ HEBREW PERIOD

This large public building belongs to the fifth stratum, and, by the pottery found, dates in the late pre-Exilic Hebrew period. It is a structure of enormous size. Its great feature is a court or enclosure, measuring about 200 feet from north to south and 110 feet east to west. The surrounding wall is $3\frac{1}{2}$ feet thick, and built of large hewn blocks of limestone.

In the centre of the north wall of this court is another building, about $36\frac{1}{2}$ feet square, containing three rooms. The south wall of this structure rested partly on, and partly off, the north wall of the court. Its walls vary from 3 to $4\frac{1}{2}$ feet in thickness. The stones are well dressed and the courses regular. The foundations of this building are of three to five courses

¹ Probably "treasury." Originally Solomonic; later repaired by Omri or Ahab. See p. 249.

of ashlar, with offsets arranged like steps, so that the lower courses project 8 inches to 19 inches beyond those above them. The upper part of the structure was of bricks made of mud and straw. Charred wood in the debris suggested roofs of wooden beams.

Nothing was found to indicate that the large court had been divided into rooms, or that other structures had been built upon it; but it seems to me to resemble very closely the great court extension of the palace of Samaria, with its "Ostraca House," built by Ahab, and may have served the same purpose—viz., for the collecting and storing of the revenue of the district, paid in corn, wine, and oil. Naturally, also, it would be the residence of the governor or revenue official, if not also of the garrison.

From the photographs, some of the blocks appear to be dressed after the style of the Ahab masonry at Samaria, some being drafted on two sides only, and some on four, and the bosses are all dressed down, except where they would not be visible. The masonry is not Solomonic, and the whole structure gives one the impression that the original was built by Ahab, suffered destruction, and was later restored with different masonry.¹ The arrangement of the blocks, which are shaped very similarly to the Ahab blocks at Samaria, is very much mixed up. Headers and stretchers are thrown in with no method whatever, but the corners are carefully bonded.

SOLOMON'S STABLES, MEGIDDO (see p. 155)

Recently Mr. Guy in his excavations at Megiddo has found the ruins of a building which he has described as "Solomon's stables," and this view is now generally accepted. Whether these stables have any connection with the palace above described, I have not yet ascertained. It is remarkable, however, that Mr. Guy does not regard the masonry of the stables as Solomonic, though he is convinced that the city of that period is Solomonic. He is inclined to believe that the masonry is the work of the Phœnician masons of Hiram, King of Tyre, who had carried out the work of building the city and the stables for Solomon, perhaps on the way home from building the temple at Jerusalem.

¹ *Samaria* I, 227. Reisner identifies Ahab's palace by this masonry, and the fact that it belongs to the second stratum, etc.

It seems likely, therefore, that the palace or treasury belonged originally to this Solomonic city, and had been repaired by Ahab or Omri when Megiddo became part of the northern kingdom. This view explains the absence of masonry of the distinctively Solomonic type, as well as the finding of drafted masonry in it resembling that of Samaria.

Along with the photograph of these stables Mr. Guy has sent me the following notes, which I include in his own words :

"This single building measures something over 50 by 25 metres (c. 166 by 83 feet), and contains five units each capable of containing twenty-four horses. In each unit the animals were arranged in two rows of stalls, facing each other across a central passage which was wide enough to accommodate chariots, though I have no evidence whether it actually did so.

"Between each animal and its neighbour was a great stone pillar which served partly to support the roof, and partly, as holes drilled in the corners show, for attaching the halters. Between each pair of pillars there was, apparently, a stone trough or manger : I have found some of these, but not many, for they are the sort of thing which would quickly be taken for other purposes after the stables ceased to be used.

"Access to the stables, and to some other parts of the town, was provided for by broad streets quite well paved, and laid out on a good plan, and the city was surrounded by a wall of defence somewhere about 4 metres thick (c. 13 feet).

"I am as sure as can be that this city is Solomonic, and refer you to 1 Kings ix. 15-19, and you will find a good deal, as you know, about horses and chariots in Kings and Chronicles.

"The masonry does not seem to me to be local, and I am inclined to believe that it is the work, at least in part, of the Phœnician masons of Hiram, who would naturally pass Megiddo on their way home from Jerusalem."

THE GRANDEUR AND WEALTH OF SAMARIA

The prosperity of Samaria is amply borne out by the grandeur of its palace. By the time of Omri Northern Israel must have been a wealthy people and the revenues considerable. The treasury of Omri may have occupied the west side of the palace, and may have been built over by Ahab's extension. Or it may have lain to the east of the palace, where excavation has not been made.

By the time of Ahab, however, the riches of Samaria had increased so much that he found it necessary to build this enormous treasure house of store chambers, which is really a citadel or fort within the city.

Again later, by 750 B.C., Jeroboam II found this treasure house insufficient, and built another extension of almost equal size to the west of Ahab's extension.

If the revenue consisted only of corn, wine, fruit, and oil, it is difficult to understand how the necessity for these extensions arose, so that one feels driven to the conclusion that treasure of a more permanent nature was accumulated in these chambers as well.

The need for enlargement does not seem to have affected the palace proper, but only the treasury, for both these later extensions are simply additions to the treasury. No clue, however, seems to have been found to explain this point or to suggest that permanent treasure was housed here as well as perishable, and the blackness of the earth in the floor of the great court of Ahab's extension is probably due to oil.

One fact, however, is clear. Samaria was an exceedingly wealthy and flourishing town in the reigns of these three kings of Northern Israel. That there was permanent treasure in gold and silver is undoubted, as is seen in 1 Kings xx., where Ben-hadad of Syria besieged the town apparently with the sole object of securing the treasure accumulated by King Ahab. As no such treasure houses have yet been found at or near Jerusalem, we cannot make comparison, but we get here an idea of what the wealth of the country must have been in the days of its greatest prosperity under Solomon.

PALACE OF OMRI AT SAMARIA, 880 B.C.

When Omri set about building his palace on the bare rock surface at Samaria, he first marked out its limits, and then scarped the rock vertically all round to a depth of 10 feet or thereabout, leaving thus a large isolated platform of rock. About 12 inches inwards from the edge of this platform he then cut trenches in the rock, 12 inches deep, except where the rottenness of the rock compelled him to cut them deeper. On the sloping surface these trenches became a series of terraces. They are almost 7 feet wide, and in them the foundations of the walls were laid. These rock-trench foundations are

a feature of these buildings at Samaria, and, curiously, I found one of them with a heavy stone wall set in it on the castle hill of Salt, in Transjordan. The partition walls were set in similar trenches of practically the same width.

The plan of the palace was the usual one, a series of open courts, or halls, with rooms grouped round them. Only the west wing has been excavated fully.

The West Wing, the North Court and Underground Rock Chamber with Secret Passage.—The north court (No. 7) seems to have had no rooms on its south side, though connected with the rooms surrounding the central or south court (No. 6). There must have been rooms on its north side, but no traces were found.

This Court 7 measures 56 feet long, 30 feet wide at the west, and 26 feet wide at the east end. In the centre of its floor, a circular shaft (28 inches wide and $4\frac{1}{2}$ feet deep) led down to an underground rock-cut chamber, measuring 20 by $13\frac{1}{2}$ feet and 16 feet high.

The entrance to this chamber from Court 7 thus meant a descent of $20\frac{1}{2}$ feet, but there is nothing to show how it was accomplished. The chamber was found almost full of earth, thickly mixed with bones of domestic animals—no human bones being found. It was not, therefore, a place for putting away troublesome people. In the middle of its west side a door, 4 feet wide, $6\frac{1}{2}$ feet high, with its sill $3\frac{1}{2}$ feet above the floor, led into a vertical shaft, which communicated with the surface. Here, again, there is no indication of how entrance or exit was accomplished, not even foot-grips on the sides. Three feet below the rock surface ledges 2 feet wide were cut on the north and south sides of the shaft to support stone slabs. When these stone slabs were in position, they made the shaft part of a tunnel, which led westwards into Room 12 of Ahab's addition to the palace, thus serving as a secret underground passage between the palace of Omri and the new treasury rooms of Ahab. Later, the underground chamber, the tunnel, and Room 12 were all thrown into disuse by blocking up the entrances, and in Room 12 this had been done with the greatest care, so as entirely to obliterate all traces of the tunnel.

Apparently the purpose for which the tunnel was made and used originally was at a later date disapproved.

The South Court (No. 6).—The south court was much smaller (31 by $26\frac{1}{2}$ feet), and was connected with the north

court by a passage (No. 1), $16\frac{1}{2}$ feet long and 10 feet wide. This passage had probably been a room off Court 6, with a door at each end. Exactly opposite to it, on the south side of Court 6, is another passage (No. 18) of the same dimensions, which led into rooms south of the Court 6 suite.

Court 6 has nine rooms round it, including these two passages, and great care has been taken to preserve the symmetry of the building. On the west and east sides of these passages, for instance, the rooms opposite to each other are exactly the same size. The east rooms (2 and 9) opposite each other measure $13\frac{1}{2}$ by $16\frac{1}{2}$ feet, and the rooms west of the passages (10 and 17) each measure $25\frac{1}{2}$ by 16 feet.

Between these two rooms, east of the passages (2 and 9), was the chief room of the palace (No. 3). It ran the whole length of the east side of the court (31 feet), and was about 13 feet wide. On the west side of the court are two small rooms about 8 feet wide, one being 13 feet, and the other about 9 feet long.

All these rooms were traced mainly by the rock-cut trenches in which the walls had rested. The slope of the rock surface on which the palace and town were built is so steep, that in some of them the floor level was 40 inches above it, while in others it was 10 feet above it.

The section described is only the wing which projected from the west side of the palace. The rooms are all rectangular, and many of the interior walls run the whole length or breadth of the building. The courts had not been roofed, but the longest beams needed to roof any of the rooms can have had only a stretch of $12\frac{1}{2}$ to 13 feet to cover, since columns were probably used to support the roof where the rooms were 25 feet wide or more. This is interesting, as showing the breadth of room which they were able to roof with single flat beams in those days. In fact, the strength of the roofing beams was the main factor in deciding the maximum breadth of a room, and all over I have found that breadth to be about 13 feet. A roof-span of 16 to 17 feet would demand beams of great resisting power to support a roof of wattle and mud.

The South Wing.—There had been a similar wing on the south side of the palace, but this has not been cleared.

The palace had also extended to the east. Perhaps the main body of the building stood on that side, but here also the ground has not been cleared.

There had also been a further extension on the west side, and this section of Omri's palace had been removed by Ahab when he made his great courtyard. Walls of Omri were found under the floor of the courtyard of Ahab.

The underground chamber and tunnel of Court 7 led originally to a portion of Omri's palace which had been destroyed by Ahab.

Thus, though we have acquired a knowledge of the masonry, construction, size of rooms, and other details of the palace, the excavation of Samaria so far has not supplied us with a definite idea of the size of the palace itself, or its appearance as a finished building.

The Walls.—The stone used was the yellow limestone of the site and the rock around. It is of poor quality; probably the scarping of the foundation supplied most of it. The stone when quarried has a soft, cheesy texture, but hardens rapidly when exposed to the air. The authors speak of the stone as yellow, but in all probability it was white when quarried, and the action of the weather turned it yellow, as in the case of the limestone used at Jerusalem.

Masonry Construction.—Before any foundation was laid, a groove was cut in the rock surface the width of the intended wall, and in this the foundations were set. On the sloping surface of the rock, the groove became a series of terraces, so that the builder could always start on a level base.

This trench was usually *not more than 12 inches* deep, but where the rock was rotten they cut right down till they struck a hard stratum. In the north wall of Court 7, for instance, the rock was cut away to a depth of altogether about 54 inches over a space 80 by 42 inches. This hole was then filled with four courses of large blocks roughly bonded, the crevices being filled with small stones and mud.

Graffiti.—One of these blocks had rude drawings of animals and trees with a rough gate, which the excavators are positive were "contemporaneous with the masonry," though they are practically the same as the rude drawings assigned to the Stone Age by Macalister.¹ It is, of course, possible that these graffiti had been carved on the rock before the block was quarried.

The *outside wall* of the palace was set about 12 inches back from the edge of the scarp on which it rested, and was 80 to 82

¹ Gezer I, 145.

inches thick. The stones on the outside face were smooth dressed, on the only fragment found still in place.

The interior foundations of partition walls were also set in rock-cut trenches and varied from 76 to 80 *inches* in thickness. The lowest course usually consisted of headers—*i.e.*, blocks laid lengthwise across the wall, two blocks to the thickness of the wall. Occasionally the wall showed these “headers” on one side, and “stretchers”—*i.e.*, stones laid lengthwise with the run of the wall—on the other face, if the “header” were specially long.

The jointing was effected by simply using stretchers over a row of headers, or by placing headers upon two headers beneath them, and corners were formed by stretchers. This type of masonry may be remarked on the tower of David on Ophel—where headers and stretchers appear mixed also.

Where four walls met, *they were not straight joints, but most carefully and firmly bonded.*

AHAB'S PALACE AT SAMARIA, 875-851 B.C.

The original plan of Omri's palace, “a rectangle with wings or offsets,” is preserved by Ahab, but the wings were increased and extended westwards, Omri's structure remaining the nucleus.

The foundations are also laid in rock trenches, which thus again preserve for us the plan of the building.

The New West Wing.—The west wall of the new west wing ran north to south for 106 yards. At that point it turned east for about 22 yards, and again north for about 18 yards, forming the angle of another wing on the north similar to that on the west. *The northern face* was traced only a small distance, but it cannot have been less than 44 yards long from east to west.

The southern face ran eastwards for about 43 yards. It then turned south for 16 yards, forming another wing just south of Omri's palace. This wall of 16 yards rested on a rock scarp. Elsewhere it rested in shallow partial trenches cut according to the slope in the rock surface.

A Tower.—In the angle made by this southern wing stood a rectangular tower of solid masonry clear of the wall of the palace, measuring about 42 feet by 53 to 54 feet. Between its north side and the southern wall of Ahab's palace was a passage

nearly $3\frac{1}{2}$ feet wide (about 40 inches), while on the east side of the tower the passage was about 12 feet wide. The tower evidently had never been joined to the palace, at least not at the lower courses. Later, the eastern passage at the north end of the tower had been blocked up with solid masonry like that of the Ahab period.

The tower was set in a square rock cutting, its walls being placed at a distance varying from 22 inches on the west to 20 inches on the north and 40 inches on the east sides from the face of the cutting. The masonry showed the same features detailed above, the marginal draft along the upper edge of a course being about 4 inches.

NOTE.—It is unfair to assume from the mere foundation that this tower was a structure of solid masonry. Apparently very little of it remained *in situ*. If it was not a mere postern platform for unloading, but a tower of some height, there is every reason to suppose it contained rooms for a gate garrison, and was somehow connected with the palace at a higher level. It may have served as an *armoury*.

The excavators think that the 12 feet wide passage was the approach to a back entrance or postern of the palace, which had been protected by the tower. There had probably been a small gateway in the south wall at that point, but the south wall was here completely demolished. Allowing this supposition to be correct, we cannot imagine a tower of solid masonry being built to protect a gateway. It must have been roomed to contain defenders.

The Enclosing Wall.—The outstanding feature of Ahab's addition is the enclosing wall. It consisted of a heavy double wall, which formed the retaining wall of the great artificial platform, and on this platform the new wing of the palace was built. At the south-west corner the level of the interior pavement of the wing was $27\frac{1}{2}$ feet above the level of the rock surface outside, owing to the slope on the rock.

The outer wall was 6 feet 8 inches, and the inner wall was 3 feet 4 inches to 3 feet 6 inches thick. Between them was a space varying from 40 to 42 inches wide, and the two walls were tied together by *cross walls at regular intervals*, somewhat similar to what was found in one section of the double brick walls at Jericho of the period 2000-1500 B.C. A system of "casemates" like these small chambers was found recently at Kirjath-Sepher in the city wall. The same appears in the forts at Ta'anach and elsewhere, which I have suggested were local "treasuries."

This inner wall and the cross walls joining it to the outer wall were, however, the foundation walls of "a colonnade or row of rooms built against the outer wall, and extending around the courtyard which occupied the greater part of the area of the new extension."

Ahab's addition thus consisted mainly of a very large court surrounded by this roofed colonnade or series of small rooms. If these were rooms, the width of each room was just the space *between the walls, 40 to 42 inches*. Some of them were square, and in some the length was double the breadth. None of them was larger, therefore, than 7 by $3\frac{1}{2}$ feet, which resembles closely those of the west fort of Ta'anach (*q.v.*). There was probably an entrance to the courtyard at the centre of the west wall.

This series of rooms ran along the south and west sides to the extreme north-west corner (see plan), and was probably used as oil or wine stores.

Inner Enclosing Wall.—The breadth of the platform was 80 feet. At this distance of 80 feet eastward from the outer west wall of Ahab's extension a second enclosing wall was built which "formed the east wall of the large courtyard and extended nearly the whole length of the building." It had originally extended the whole length, and joined the west wall where, after running east for 22 yards, it again turns north, but part of it was totally obliterated.

The Treasury, the Ostraca House.—This western extension of Ahab's was thus, it appears, originally intended to be a *great open court of the palace*, and measured 318 feet long by 80 feet broad.

The floor of this open court was a hard trodden surface, 4 to 16 inches thick in parts, an accumulation of black debris representing a considerable period of time. In this debris of the floor were found the Hebrew inscribed potsherds, the Osorkon vase, etc., and abundance of fragments of Hebrew ware.

Below this floor the courtyard had been levelled up with masons' chips and earth of a nondescript character containing no remains except a few Hebrew potsherds, which may represent vessels broken by the workmen. This levelling up varied from 8 to 40 inches deep, according to the slope on the rock surface. On the rock surface the masons had dressed the stones, and the chips had been levelled and trodden to form this bed 4 to 16 inches in depth. Before the court was levelled up, however, and finished, this design had been departed from,

and part of the southern end of the court area was used as a site for a building containing a series of store chambers to receive the wine and oil and other revenue in kind brought to the palace.¹ The foundation walls of this building rest on the rock surface, not on the levelled-up floor.

A large number of "ostraca," or potsherds inscribed with memoranda of jars of wine and oil received, found in the debris within the area, show clearly what purpose these rooms served. On this account the building has been named "the Ostraca House."

The house stood isolated at the south end of the great court, with an open passage or pavement between it and the walls of the court on three sides. On the south end this passage was 12 feet wide. On the east it was only 6 feet, and on the west, which was the front, it varied in width from 22 feet 8 inches to 24 feet 8 inches. Taking the chief corridor (No. 409) as the centre of the building, the house must have been 106 feet long. It was 37 feet 8 inches wide, and rectangular in plan. It had contained three groups of six rooms each. These rooms were arranged in sets of three around three courts, extending across the building. These courts had doors on the west side. The central court (No. 409) was found *in situ*, but of the southern one (424) only the east end was found. There had originally been a court at the north end also, with three rooms on each side, but this had disappeared. The various rooms were of equal size and almost square, the foundations showing measurements of 10 feet by 8 feet 4 inches.

The east or back wing of the house was divided into two long narrow rooms running parallel (401 and 417) with a cross chamber the whole breadth of the wing at the south end (423). No. 418 may be a separate room or the continuation of the long room 401. In all these rooms the doors were in a corner. They thus needed only one door jamb and the lintel was built into the wall.

Construction and Masonry.—Though the foundations went down to the rock, the floor of this house was on the same level as that of the great courtyard. The foundation walls had slight offsets, 4 to 8 inches in width, with a space of 32 to 40 inches between them.

The masonry of this building was peculiar to itself and

¹ See *Jericho*, p. 120.

unlike that of the preceding or following periods. Broken stones, varying in size, were used, and they were neither fitted nor dressed. Mud-mortar and chips were used to fill up the resulting interstices. The upper walls were 26 to 28 inches thick, and of similar material, except at the door jambs, where larger stones were used, squared on the exposed sides. "The rough surfaces of the walls had no doubt *been plastered over with a thick layer of mud and straw*, which was perhaps also mixed with ashes (charcoal?) as in the cisterns."¹

The house had remained in use for a considerable period, as later repairs and alterations on the walls showed. In some of these later walls the doors were not at the corner, but in the middle of the wall. The long east room (417) had been later divided into three. All these walls of later date could easily be distinguished from the original walls, because they did not go down to the rock, and the masonry differed.

At the western end of the central court (409) was found a group of "characteristic Israelite bowls" buried in debris above the floor, but under a later Hellenistic wall.

There is little doubt that there had been another similar building at the north end of the great courtyard which had been demolished by later occupants of the site, and all these small chambers running round the outer wall of the Ahab extension must have been store chambers too. They are too small for human dwellings.

The King's Treasury.—This extension of Ahab's may, I think, be aptly described as the king's treasury. At Jerusalem, after 600 B.C., the revenue was paid into and stored within the temple buildings, thus maintaining the idea of a theocracy, not a monarchical government. 1 Chronicles ix. 26 speaks of the treasuries of the House of God. Nehemiah xiii. 12 speaks plainly on the subject: "Then brought all Judah the tithe of corn, wine, and oil into the treasuries."

In Samaria the tithe or revenue was evidently paid into the treasuries of the palace of the king, and this elaborate system of store chambers seems to be no other than the treasury or revenue offices of King Ahab.

Other Buildings of Ahab.—The northern wing of Ahab's extension consisted also of a court with a series of chambers round it. In this court was the Pool of Samaria described under Cisterns.

¹ *Samaria*, p. 116.

The space between the rock scarp of the Omri palace and the east wall of Ahab's great courtyard had been filled with additional rooms, probably arranged as usual in the form of series of chambers opening into small courts.

Of the rooms in this section, Room 12 is interesting on account of the underground tunnel leading from it into the rock chamber underneath Court 7 of Omri's palace. This room had been part of Omri's palace originally. At some later period the underground chamber and Room 12 itself were abandoned, the subterranean passage being blocked, and the door between Rooms 11 and 12 being built up so carefully on the side next Room 11 as to conceal the existence of Room 12 entirely.

Room 13: Room with Paved Floor sunk in Rock; a Bath or Reservoir.—West of Room 10 of the Omri palace, and about 6 feet 8 inches out from the rock platform of the palace, a paved floor was found, measuring roughly 15 feet by 13 feet 4 inches. It was made of carefully fitted and finely dressed rectangular slabs so as to make a perfectly smooth surface. These slabs averaged 40 by 22 inches.

This pavement was sunk in the rock surface, which enclosed it on every side, coming close up to the edge of the blocks. At the northern end the rock edge was level with the pavement, but it rose gradually till at the south end it was 3 feet higher than the pavement. At the south-east corner of this paved floor, 20 inches inward from the rock, the inner face of a wall was found, and another part of a wall remained *in situ* on the north side.

This pavement had, therefore, been the floor of a small room (about 13 by 10 feet) standing isolated. The peculiar feature is that the paved floor was 6 feet below the level of the floor of Ahab's great western court, and 10½ feet below the floor level of Rooms 11 and 12.

Reisner thinks this may have served as a bath or a small pool, which would explain its being sunk so deep in the rock; but, if it was necessary to plaster the walls of the cistern in the north court, this ought to have been plastered also. There seems, however, no other satisfactory explanation of its being sunk in the rock to such depth.

As in the case of the great courtyard of Ahab, the northern end of this section has been depleted of earlier ruins by Roman buildings whose foundations had been sunk to the rock.

Materials and Masonry of Ahab's Structures.—The same stone was used as was used by Omri, and was quarried on the site.

Ahab scarped the rock and cut rock trenches for his walls exactly in the same way as Omri did. The highest or deepest point of the scarp on which his structure rested was over 10 feet in height. The slope on the rock surface from S. to N. at one part showed a drop of nearly 12 in 100 feet. This slope was parried by making the trenches cut to receive the foundation walls run in a *succession of terraces*. The manipulation of the various levels of the rock showed everywhere considerable ingenuity, notably on the south side, where the rock fell away and there was no scarp, and at the south-west corner, where the rock rose towards the east, and offsets were cut in it to receive the foundations.

Ahab's Masonry: Methods of Construction; Untrained Amateurs.

—1. The blocks, roughly rectangular in shape, were brought to the building in the rough as they left the quarry, and were dressed and fitted on the spot.

2. The corners and the line of the wall having been fixed, a trench was cut in the rock, the exact width of the proposed wall. This was really their method of negotiating the rough and sloping surface of the rock on which they built.

3. They built from both corners towards the middle, a practice observed in Babylonia from very early times.

4. After a stone was laid in position, they dressed a narrow margin on right or left side, and chipped the side of the block straight, so as to make it fit to the next stone of the course. The next stone was then dressed to fit it as closely as possible. The masons aimed merely at getting the stones to fit closely on the outside face, no matter how far they diverged toward the centre of the wall. The bases of the blocks were fitted to the rock, and when a course was completed, the rough surface of the blocks in the course was dressed smooth to a uniform level surface for the next course to rest on. Thus everything but the quarrying was done on the spot as the work progressed, which made it a slow process.

It is the method of untrained amateurs. They had not the skill to use the modern method, where the dressing and fitting is done by calculation and off a plan, in the stonecutters' yard. It is doubtful if they had even a rude sketch of the proposed building to work by. The plan seems to have de-

veloped itself; but they certainly had ideas of symmetry and were careful of parallel lines and rectangles.

5. The lowest course, set in the rock trench, consisted of headers, and the blocks were cut mostly so that two filled the breadth of the trench exactly. Where the trench was deep, there were two courses of headers.

The next courses consisted of headers and stretchers alternately, with no fixed design, but the bonding was carefully attended to. One stretcher was followed sometimes by two, sometimes by three headers. In these, both ends of the blocks were dressed, to make them fit more closely. The courses varied from 16 to 20 inches, and even 25 and 30 inches depth.

After a course was laid, a margin was dressed on its upper edge the whole length, that a straight line might be drawn by which to level its surface. The marginal dressing varied from $1\frac{1}{2}$ inches to 4 and even 6 inches in breadth. *The original purpose of this dressed margin* would thus appear not to be decorative, but to enhance the exactness of the work.

In the lowest course the faces of the headers had usually a "narrow, uneven, marginal dressing on one vertical edge," measuring $1\frac{1}{2}$ to 4 inches in width, and often this dressing did not continue the whole length of the edge. The face was otherwise left rough. The first nineteen of the stones of one wall so dressed lay with the drafted edge on the right side, then followed four with it on the left, three being only partially drafted. Two had the drafted edge on both vertical sides. The masons had worked toward each other from both ends.

In the upper courses the stones had a heavy, rough boss, with a drafted edge all round, varying from $1\frac{1}{2}$ to $3\frac{1}{4}$ inches in width, and in some stones 4 to 6 inches wide. Here again the drafting was irregular, some stones having it on one side, some on two, and some on three only.

If the masonry met at the centre, leaving a narrow gap, a wedge-shaped stone of the necessary size was fitted in.

The bosses on the centre of the blocks were left till the whole wall was completed, and were then dressed off over the whole surface which was to remain visible. Where not visible, they were left undressed. The bosses were, therefore, not decorative, but accidental. In fact, the bosses, as I have suggested before, were the result of the method of forcing the blocks from their bed in the quarry by wedges or levers.

Right down to Roman times in Samarian masonry these bosses were dressed off on visible walls.

The above details are taken from the section of masonry found *in situ* at the south-west corner of Ahab's extension of the palace, and are confirmed by another section of five courses found in H. 16. They refer also to the exterior face of the wall only. *On the interior face* the blocks were left to fit as best they might, and where there were interstices, these were filled with chips.

Jeroboam II (782-741 B.C.).—Additions and alterations were made to the palace by Jeroboam II on the west side, south-west corner, and in the interior.

The western wing of Ahab was extended about 58 feet further west, and a series of chambers added outside of Ahab's wall similar to those inside. The walls of this addition can be traced mainly by the rock trenches cut to receive them and a single course of masonry.

The south wall was set back nearly 6 feet from the face of the Ahab south wall. This addition had an *outer wall 5 feet thick*, and an *inner wall about 3 feet 10 inches thick*. The space between measured 8 feet 8 inches. The new wing was not laid to the west wall of Ahab's wing, but had a separate east wall of its own about 5 feet 4 inches thick. The walls ran exactly parallel with Ahab's walls.

Jeroboam's masonry was later embodied in the Greek fort wall, which covers many of the chambers. To judge from the plan, this addition looks like another building, somewhat similar to the ostraca house, for the reception and storing of revenue, the chambers in the thickness of the wall being part of the system.

The Round Tower.—A large round tower occupied the south-west corner of this extension, its circumference cutting into it and projecting only a little beyond its southern face. The diameter of this tower was 49 feet. Its walls were 7 feet 10 inches thick, and built on the sloping rock surface, the inner part having one corner sunk in a shallow rock trench.

The interior space was thus 33 feet in diameter and must have contained rooms. It was probably an armoury. If it was divided into flats, the stairs must have been inside.

Dressing.—The bosses of the stones were dressed off both outside, where the wall was visible, and throughout the interior. Where the masonry was out of sight, the bosses were left rough.

Masonry.—The wall was exactly two headers and one stretcher in thickness. The stones were accordingly laid in that way. The stretchers were laid on the inside in one course, and on the outside in the next. The face of the wall, both outside and inside, was thus a succession of headers and stretchers alternated.

The Rooms in Jeroboam's Extension.—The whole of this addition was divided into rooms, the partition walls being 5 feet in thickness. Court 320 was originally over 36 feet long and 17 feet wide. A wall, about 40 inches thick, ran along the centre lengthwise, which had probably supported pillars carrying the roof.

The chambers appear to have been arranged much as in the ostraca house. The whole wing seems to have been built as an additional provision for receiving and storing the revenue in corn, wine, and oil, and it continued along the whole western face of Ahab's "treasury," though badly destroyed in the centre by later Hellenistic work.

The masonry throughout is much the same as Ahab's.

MASONS' MARKS

Ten masons' marks were found on various stones exposed on the site. In the order of 1-10 as drawn, these represent :

1. The Hebrew or Phœnician letter Vav.
2. The letter Tau.
3. A star with two prolonged rays, a mark very common in pottery of the period 1600-1200 B.C.
4. The ancient form of the Hebrew letter He.
6. Very closely resembles a modern smoothing trowel, for putting a surface on plaster or cement, with a handle for the insertion of the four fingers. It may represent the Hebrew letter Tsade.
7. A mark like our letter T. This mark is found on pottery of the period 1200-600 B.C., and in rougher form on the earlier ware, 1600-1200 B.C.
8. A rhomboid with a tail, the Phœnician form of the Hebrew letter Qoph. This mark is also frequently found on pottery of the period prior to and about 2000 B.C., where, however, the rhomboid is a rough oval or badly formed circle.
9. Resembles a "dumb-bell," or letter T on its side, with a cross bar at each end. It appears also on pottery of the

period 2000-1600 B.C., a long bar with a cross bar at each end. It is the same as the Phœnician form of the Hebrew letter Zain.

5. The Phœnician form of the Hebrew letter Aleph, two vertical lines cut across by another line, with a projection outside. It seems more clearly to resemble the Phœnician form of the Hebrew letter Yodh.

Thus, of the nine examples given, seven are letters, and two are probably key-marks (Nos. 3 and 6).

GEZER: THE MACCABEAN PALACE (JOHN HYRCANUS)

This palace¹ had a private gate in the city wall, so that the building must have been the headquarters of the military governor, who at this period was John Hyrcanus. A breach in the wall is probably that made by his father Simon, who had also built this residence. On a small block of limestone, of the size and shape of a brick (21 by 7 by 6 inches),² was found a Greek inscription, which has been translated: "Pampras says: May fire follow up Simon's palace." Such imprecations scratched on a stone of a building are quite common. The expression "follow up with fire" occurs in an Arab imprecation in a folk-tale published by Mr. Hanauer.³ Two more fragments of stone were found with illegible Greek lettering. The inscription proves that the building had been the palace of Simon Maccabæus.

The masonry consists of well squared stones, in regular courses, the type which we generally regard as Roman.

A series of long narrow chambers, with very thick walls, fills the breach in the city wall. These are the foundation walls, and the rooms may have been store chambers like those in Ahab's extension of the palace at Samaria. They have no doors.

It is possible that the breach was repaired by two thick parallel walls and these are simple empty spaces left between them. The private gate entrance to the palace led through these parallel walls, and is over 9 feet wide. The hinge and bolt holes of the double door remain. This gate is of the same masonry as I found in the later Hellenistic or Roman repair of the outer wall on Ophel.

The rooms in the wall on east and west of the gate are all

¹ Gezer I, 211.

² Cf. limestone bricks at Sandahannah (21 by 11 by 6 inches).

³ *Folk-lore of the Holy Land*, p. 21.

alike. The west room led into the long room of the building, but two brick partitions in it had closed this means of access.

The wall with the gate is the south wall of the palace. The rooms are as usual a series of chambers surrounding an open courtyard. Here there were two courts. The walls are of rough masonry, the stones being larger than those used in other houses, and not dressed like the stones of the gate entrance.

But these remarks refer to the substructure. The superstructure may have been of finely finished masonry and very likely was. It was probably of the same fine style and finish as the Greek outer wall on Ophel.

Sewer.—The house is remarkable for the sewer which runs under the gate, 22 to 26 inches wide and 31 to 21 inches deep. It is a stone-built drain, and paved with slabs; the western section is on a larger scale. It is 54 inches deep and 48 inches wide where it passes under the gate. It is built of small stones and mortar, and lined with plaster. This much resembles the sewer which passes through Ophel (Fields 7 and 9), and is still in use.

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